

Children and young workers

Code of Practice 2006

OIR Disclosure Log

This Queensland code of practice was preserved as a code of practice under section 284 of the *Work Health and Safety Act 2011*.

This code was varied by the Minister for Education and Industrial Relations on 27 November 2011 and published in the Queensland Government Gazette on 2 December 2011.

This preserved code commences on 1 January 2012.

OIR Disclosure Log

PN11171

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1. Introduction

In Queensland, the *Work Health and Safety Act 2011* (the Act) provides for the protection of all people at workplaces, including children and young workers. This legislation covers children who are working as well as children who are in a workplace for any other reason. The Act places the responsibility for workplace health and safety upon persons conducting a business or undertaking. This responsibility applies to the person conducting a business or undertaking whether the business or undertaking is conducted alone or with others, and regardless of whether or not the business or undertaking is conducted for profit. The Act also places responsibility on others responsible for work activities such as persons conducting a business or undertaking with management or control of the workplace, or persons conducting a business or undertaking with management or control of fixtures, fittings or plant at the workplace.

The Act also requires workers to take reasonable care for his or her own health and safety, take reasonable care that his or her actions do not adversely affect the health and safety of other persons, and to comply and cooperate with any reasonable instruction, policy or procedure of the person conducting a business or undertaking which relates to health and safety at the workplace. When children are employed, they have the same duties as any other workers under the Act.

This code of practice has been written for workplaces where children and young workers are likely to be. It is based on the understanding that there are some special characteristics of children and young workers to consider when managing workplace health and safety. Young workers may not make mature decisions about how to work safely. They may leap into situations before thinking about their own safety and the safety of others. They may not be capable of taking on the same work as adults in the workplace. Young workers may be keen to work, but may need more experience and training before they can work safely on their own. Children can be playful and adventurous at times when there is a need for great care. Sometimes their natural curiosity will take them into dangerous situations in workplaces, even when they are warned not to be there.

This *Children and Young Workers Code of Practice 2006* is an approved code of practice under section 274 of the Act. An approved code of practice is a practical guide to achieving the standards of health, safety and welfare required under the Act and the *Work Health and Safety Regulation 2011* (the Regulation).

A code of practice applies to anyone who has a duty of care in the circumstances described in the code. In most cases, following an approved code of practice would achieve compliance with the health and safety duties in the Act, in relation to the subject matter of the code. Like regulations, codes of practice deal with particular issues and do not cover all hazards or risks which may arise. The health and safety duties require duty holders to consider all risks associated with work, not only those for which regulations and codes of practice exist.

Codes of practice are admissible in court proceedings under the Act and Regulation. Courts may regard a code of practice as evidence of what is known about a hazard, risk or control and may rely on the code in determining what is reasonably practicable in the circumstances to which the code relates.

Compliance with the Act and Regulation may be achieved by following another method, such as a technical or an industry standard, if it provides an equivalent or higher standard of work health and safety than the code.

An inspector may refer to an approved code of practice when issuing an improvement or prohibition notice.

In providing guidance, the word 'should' is used in this Code to indicate a recommended course of action, while 'may' is used to indicate an optional course of action.

This Code also includes various references to provisions of the Act and Regulation which set out the legal requirements. These references are not exhaustive. The words 'must', 'requires' or 'mandatory' indicate that a legal requirement exists and must be complied with.

Who has duties?

A **person conducting a business or undertaking** has the primary duty under the Act to ensure, as far as reasonably practicable, that workers and other persons are not exposed to health and safety risks arising from the business or undertaking.

Officers, such as company directors, have a duty to exercise due diligence to ensure that the business or undertaking complies with the Act and Regulation. This includes taking reasonable steps to ensure that the business or undertaking has and uses appropriate resources and processes to provide and maintain a safe work environment.

As discussed above, **workers** have a duty to take reasonable care for their own health and safety and that they do not adversely affect the health and safety of other persons. Workers must comply with any reasonable instruction and cooperate with any reasonable policy or procedure relating to health and safety at the workplace.

Consulting with workers

Consultation involves sharing of information, giving workers a reasonable opportunity to express views and taking those views into account before making decisions on health and safety matters.

The Act requires that you consult, so far as is reasonably practicable, with workers who carry out work for you who are (or are likely to be) directly affected by a work health and safety matter.

If the workers are represented by a health and safety representative, the consultation must involve that representative.

You must consult your workers when proposing any changes to work that may affect their health and safety.

Consulting, cooperating and coordinating activities with other duty holders

The Act requires that you consult, cooperate and coordinate activities with all other persons who have a work health or safety duty in relation to the same matter, so far as is reasonably practicable.

Sometimes you may share responsibility for a health and safety matter with other business operators who are involved in the same activities or who share the same workplace. In these situations, you should exchange information to find out who is doing what and work together in a cooperative and coordinated way so that all risks are eliminated or minimised as far as reasonably practicable.

Further guidance on consultation is available in the *Work Health and Safety Consultation, Coordination and Cooperation Code of Practice*.

1.1 How is this code of practice structured?

Section 2 of this code of practice considers when a child is at the workplace. Eight different groupings of young workers and children in workplaces are identified, and a definition of “workplace” is provided.

Section 3 looks at children who are at the workplace as workers. It includes general information about the duties of persons conducting a business or undertaking towards workers and the special characteristics that they should consider when young workers are employed. The particular hazards that young workers may face at a workplace are described and methods for controlling the exposure to risks associated with these hazards are discussed.

Section 4 of the code covers children visiting workplaces. This section explains the duties of persons conducting a business or undertaking and others towards visitors and others. It also includes information about the special characteristics of children, workplace hazards that are likely to represent particular risk to these visitors, and controlling risk for children who may be visiting the workplace.

Section 5 provides further information on how the risks associated with children and young workers can be managed. The *How to Manage Work Health and Safety Risks* Code of Practice provides practical advice on the risk management process including the conducting of a risk assessment for the workplace. The information provided in sections 3 and 4 can be used by persons conducting a business or undertaking when performing a risk assessment for their workplace.

Section 6 can be used to assist in the training and supervision of young workers. It contains information on induction training for young workers, and also includes information about their duties as workers, their right to refuse work and the responsibility of all workers to avoid putting other workers at risk.

2. When is a child at a workplace?

To answer this question, this section describes the groups of children and young people that may be at a workplace. This section also defines a “workplace”.

2.1 Children and young workers

Children are people who are under 18 years of age. Within this code of practice, young workers are people who are under 18 years of age and who are performing work for the purposes of a business or undertaking.

Young workers

Young workers include the following:

- Children leaving school and entering full-time employment for the first time, including apprentices and trainees.
- Children engaged in part-time or casual employment.
- Children who work but are not paid for the work done, such as unpaid work done for a family business (excluding domestic chores).
- Work experience students and vocational education and training students who are still attached to the education and training system.

Children in workplaces

- Children who are part of the work process, such as customers in a shop.
- Children not engaged in a work activity, but brought to a workplace by a parent or other adult at any time.
- Children who live in the workplace.
- Children who enter workplaces unexpectedly at any time.

2.2 Definition of 'workplace'

The Act defines a workplace as a place where work is carried out for a business or undertaking and includes any place a worker goes, or is likely to be, while at work. This definition includes places commonly recognised as workplaces, such as shops, factories, construction sites, hospitals, farms and rural properties. It also includes many other types of less obvious workplaces, such as a vessel used for teaching members of the public to scuba dive and a vehicle supplied by the person conducting the business or undertaking for use by a worker in the performance of work. Certain workplaces, such as mines, are not covered by this code of practice.

2.3 When is a child at a workplace?

Some examples of when children are at workplaces include when they:

- participate in work experience programs
- attend special work programs for disabled people
- go to work on a casual basis after school or during school holidays
- go to a parent's workplace at any time, for example, during school holidays
- receive treatment in a hospital, medical centre or centre for the disabled
- live on a farm or other workplace
- ride in a truck, tractor, or other vehicle used for work
- help with farm work
- help in a family shop or business, and
- enter a backyard shed or work area used by a person who works from home.

Children in workplaces may be playing, they may have strayed onto the workplace, a parent or person who works at the workplace may have taken them onto the workplace, or they may be workers themselves. The reason children are in the workplace makes no difference to the fact that the work health and safety legislation provides for their protection from the risk of death, injury or illness being caused by:

- a workplace
- a relevant workplace area
- work activities, and
- plant or chemicals for use at a workplace.

3. Young workers

This section looks at children who are at the workplace as workers. There are general provisions in the Act about the health and safety of all workers, including young workers. These provisions apply to full-time, part-time, casual work and unpaid work, such as work in a family business, on a farm or assisting a parent who works at home. The definition of 'worker' also covers apprentices, trainees, subcontractors and volunteers.

3.1 Duties of persons conducting a business or undertaking

Under the Act, persons conducting a business or undertaking have a duty to ensure the workplace health and safety of all people who perform work for them. This duty extends to all workers and the definition of ‘worker’ includes contractors and volunteers who perform work for the business or undertaking. The duty also applies to any other person who can be affected by the work carried out as part of the business or undertaking.

Under the Act, persons conducting a business or undertaking have the following duties:

- providing and maintaining a work environment without risks to health and safety
- providing and maintaining safe plant and structures
- ensuring the safe use, handling and storage of plant, structures and chemicals
- providing adequate facilities for workers and ensuring access to those facilities
- providing information, training, instruction or supervision that is necessary to protect all persons from risks to health and safety arising from the work carried out as part of the business or undertaking
- monitoring the health of workers and the conditions at the workplace for the purpose of preventing illness or injury to workers from the conduct of the business or undertaking.

3.2 Special characteristics of young workers

Persons conducting a business or undertaking owe duties regarding workplace health and safety, and should follow the risk management process (see the *How to Manage Work Health and Safety Risks* Code of Practice) to manage health and safety at their workplace. Some of the special characteristics of young workers that may affect workplace health and safety are:

Characteristic	Implication
The size of the person and level of physical maturity.	Are young farm hands physically capable of handling large and cumbersome bags of seed?
Their general behaviour and maturity.	What might happen if young workers “skylark” around industrial machinery or in areas where chemicals are used in large open baths or vats?
Their work experience and training.	Would a young worker in a chemical assay laboratory understand that a chemical-resistant apron was needed for protection from the chemicals in use? That is, do young workers recognise hazards and understand the control measures in place to manage the risks associated with the hazards?
Their confidence to raise problems with their supervisors.	Would young workers feel confident to tell their supervisor that they are having difficulty performing a particular task? Would they tell their supervisor when their muscles are tired from repetitive work? Would they feel confident to make a complaint about another worker’s language or behaviour towards them?

<p>Their ability to make mature judgements about their own safety and the safety of others.</p>	<p>Would young workers on a remote station consider packing food, water, tools to repair a flat tyre and first aid equipment before they set off to ride motorbikes a long distance?</p>
<p>Their ability to cope with unexpected and stressful situations.</p>	<p>What would a young worker in a family shop do if confronted by aggressive customers or robbers, if there was no adult present at the front counter?</p>
<p>Special characteristics that mean young workers are more likely to be affected than adults in the same situation.</p>	<p>Should young workers be required to work at the same rate as adults when their muscles and bones are not fully developed?</p>

3.3 Particular hazards for young workers

The following hazards are likely to represent a particular risk to young workers compared with older, more experienced workers. Persons conducting a business or undertaking should pay attention to these hazards and make sure associated risks are managed using the risk management process as described in the *How to Manage Work Health and Safety Risks Code of Practice*.

Throughout this section of the code, numerous documents will be referred to. Unless stated otherwise, these documents are available on the Workplace Health and Safety Queensland website www.worksafe.qld.gov.au.

3.3.1 Physical work activity

Hazardous manual tasks

Young workers may be at greater risk of manual tasks injuries because of their smaller size and the fact that their muscle strength is still developing. They may misjudge the degree of difficulty when handling items that are heavy, bulky or out of reach and may persist when a more experienced worker would ask for assistance.

For more information about managing manual tasks risks, please refer to the *Hazardous Manual Tasks Code of Practice*.

Repetitive work

Injuries to the muscles and joints may occur in jobs where repetitive or forceful movements are required, especially with awkward postures or insufficient recovery time. Young workers may not be able to recognise the early symptoms of work-related overuse injuries or know what to do to avoid more serious injuries.

Vibration

Young workers may face a greater risk of injury to the arm and shoulder following long periods using tools and equipment that vibrates. They may become tired more easily in situations where they have to maintain a tight grip on a piece of equipment to control it.

Regular exposure to whole-body vibration, such as when riding in off-road vehicles on uneven surfaces, may be associated with back pain and other spinal disorders. Young workers may be at greater risk of damage to the spine because their muscle strength is still developing and their bones do not fully mature until around 25 years of age.

Noise

Young workers may face a greater risk of damaged hearing because of their poor understanding of the effects of excessive noise and failure to follow safety instructions. Research suggests that hearing impairment at a young age is likely to affect education and employment opportunities later in life.

For more information about managing noise risks, please refer to the *Managing Noise and Preventing Hearing Loss at Work Code of Practice*.

Extreme cold or heat

In the Queensland climate, there may be a high risk of workers collapsing due to heat exhaustion or potentially fatal heat stroke. Some industrial protective clothing may also prevent loss of body heat.

Young workers may not be able to recognise the early body reactions to extreme heat or cold, or know what to do to avoid more serious symptoms. They may also be unwilling to draw attention to the fact that they feel unwell in situations where they are trying to keep up with other workers.

For more information about managing environmental risks, please refer to the fact sheets regarding heat stress on the Workplace Health and Safety Queensland Website at www.worksafe.qld.gov.au.

Sunburn

The risk of sunburn may be increased in young workers who may be less likely to follow instructions to limit sun exposure or to use protective clothing and sunscreen lotions. As the effects of skin damage due to sun exposure are long term, the effects often do not become evident until later in life.

Hazardous chemicals and other substances

There may be greater risk of exposure to hazardous chemicals and accidents with explosive and flammable liquids and gases when young workers are involved, because of their inexperience and poor ability to understand the consequences of failing to follow safety instructions.

Young workers may be unsure of how to access safety information in Safety Data Sheets (SDSs) for hazardous chemicals and they may not understand them if they do have access to them. Exposure to certain chemicals may have more serious consequences for young workers than adults, e.g. the effects of lead.

Safe work procedures and the proper use, wear, storage and maintenance of personal protective clothing and equipment may need to be closely supervised to avoid serious injury or disease. Farm workers should undertake a recognised chemical safe course such as *ChemCert*.

For more information about managing the risks associated with chemicals, please refer to the *Hazardous Chemicals Code of Practice*, the *Labelling of Workplace Hazardous Chemicals Code of Practice* and the *Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice*.

3.3.2 Operating machinery

Industrial equipment and machinery

Inexperience may result in poor ability to identify hazards associated with the operation of industrial equipment and machinery or to understand the consequences of failing to follow safe operating instructions.

For more information about managing the risks associated with machinery, please refer to the *Plant Code of Practice* and the *Rural Plant Code of Practice*.

Vehicles

Young workers, with no experience driving vehicles on roads, may be required to drive vehicles and ride motorbikes in off-road situations, such as work on rural properties. They may also be required to move vehicles in other workplaces, such as within construction sites, depots, maintenance workshops and rail yards. Young workers, without the necessary skill or training, should not be operating vehicles on any work site.

Young workers may be less likely to be able to control a vehicle and more likely to take risks resulting in breakdowns and accidents. They may not have the experience to cope with off-road situations, such as driving in sand or mud. Lack of experience may also affect young workers' ability to survive if stranded in remote locations.

All terrain vehicles and farm bikes

All terrain vehicles (ATVs) and farm bikes can be hazardous. These vehicles are used for work and are capable of reaching high speeds. Injuries generally tend to be due to rider error. The risk of injuries is much greater among inexperienced ATV drivers than those who have received training. Young workers should have proper instruction, and be fully able to control the machine they are operating.

Persons conducting a business or undertaking at, or persons conducting a business or undertaking with management or control of rural workplaces should ensure:

- Riders of adult-sized ATVs and farm bikes in the workplace are over 16 years of age (as per manufacturers' instructions) and are given sufficient training and supervision.
- Passengers do not ride on ATVs or farm bikes (unless the ATV has a designated passenger seat), as passengers restrict the rider from adopting an active or dynamic riding style necessary as an aid to cornering and when riding up and down slopes.
- Riders wear appropriate personal protective equipment such as helmets, goggles, gloves, enclosed footwear and clothing that covers both arms and legs when operating an ATV or farm bike.
- ATVs and farm bikes only have attachments that are compatible to the bike's specifications.
- Riders of ATVs and farm bikes are appropriately trained, particularly in the riding characteristics and the use of the ATV or farm bike, in the different types of terrain and riding conditions they are likely to encounter in the workplace.
- ATVs or farm bikes in need of repair are not used.

3.3.3 Other work situations

Workplace violence and workplace harassment

Young workers may find it difficult to cope with stressful work situations, such as dealing with violent and aggressive behaviour. They may fear for their physical safety, especially if they work alone in jobs where they handle money. They may also worry about losing their jobs if they complain.

New work may be stressful for young workers who are subjected to practical jokes, teasing and unpleasant initiation ceremonies. Workers should not be subjected to this type of behaviour.

For more information about workplace harassment, please refer to the *Prevention of Workplace Harassment Code of Practice*.

Unpopular work

Young workers who are keen to do well in their first jobs may be given work that is unpopular with other workers. Inexperienced new workers may not know how to deal with hazards associated with unpopular work, such as cleaning up spills, cleaning toilets and working in spaces that are hot, noisy, cramped or dirty.

Paced work

Young workers may be less skilled in pacing the work according to their capabilities. They may be more subject to peer pressure to take on tasks that are too much for them, or to work too quickly.

3.4 Controlling exposure to risk for young workers

When selecting the best way to control exposure to the risk of death, injury and illness for young workers, persons conducting a business or undertaking must follow the risk management process set out in the *How to Manage Work Health and Safety Risks Code of Practice*.

4. Children in workplaces

This section of the code of practice looks at situations when children are in a workplace, but are not workers. In these situations, children may be visiting a workplace, may live at a workplace, or may be there as part of a work process.

4.1 Duties of persons conducting a business or undertaking towards children in workplaces

Under the Act, persons conducting a business or undertaking have a general duty to make sure that people are not harmed in any way by the work activity, business or undertaking. This duty extends to children who may be at the workplace for any reason, and at any time.

4.2 Special characteristics of children

In situations where children are at workplaces, the main characteristics to consider are their normal adventurous behaviour and disregard for their own safety. Children are more likely to play on equipment, to climb, hide in “cubby holes”, play in excavations, go where they are not supposed to go, and experiment with the chemicals they may find. Persons conducting a business or undertaking should ask themselves how and when children can gain access to the workplace or parts of the workplace, what they are likely to find and what they would do. They should consider access after hours as well as during normal work hours.

4.3 Particular hazards for children

The following hazards are likely to represent particular risks to children at the workplace. Persons conducting a business or undertaking should pay attention to these hazards and ensure the associated risks are managed using the risk management process described in the *How to Manage Work Health and Safety Risks Code of Practice*.

Construction sites

Children may interfere with hazardous chemicals such as paint and cement. They may climb on ladders left against the side of buildings or they may decide that scaffolding is fun to play on. There is a risk of falling from heights or they may dislodge something, such as bricks stacked on a scaffold, and these items may fall on others below.

Materials, such as large drainage pipes or stacks of timber stored adjacent to these workplaces, need to be taken into account when identifying hazards for children playing. To children, demolition and construction sites look like great places to explore, dig, hide and generally have a great time. They

are likely to climb into holes and excavations with high risk of suffocation if the earth collapses around them. There is also the chance that water will collect in excavations and empty containers, increasing the risk of drowning.

Electrical hazards

Children may use or interfere with electrical equipment in a manner that exposes them to the risk of death or injury. For example, they may turn on switches to see what happens, pour water on electrical equipment as part of their play activity and poke things into holes where there may be “live” wires. They may also remove warning tags placed to ensure others do not turn equipment on. All of these activities would increase the risk of electric shock for themselves and others. On construction sites, children playing may discover “live” cables unearthed in the construction process or crawl into small spaces where there are electrical hazards not identified by adult workers.

To control electrical risks, persons conducting a business or undertaking should ensure:

- Damaged or faulty electrical equipment such as power sockets, leads and appliances are removed from service.
- Damaged or faulty equipment is replaced, or repaired by a qualified electrical worker as soon as possible.
- Power points are protected by safety-shutters, or all vacant power points are covered by plastic plug protectors.
- Electrical appliances and leads are kept away from water.

Persons conducting a business or undertaking should consider installing a safety switch in their workplace. Safety switches monitor the flow of electricity through the circuit. They automatically shut off the electricity supply when current is detected leaking from faulty switches, wiring or electrical appliances. This stops the chance of current flowing to earth through a person, electrocuting them.

For more information about electrical safety, including specific duties, please refer to the Electrical Safety website: www.eso.qld.gov.au.

Hazardous chemicals and other substances

In situations such as farms and backyard workshops where children may play in work areas, they may interfere with hazardous chemicals or climb into spaces that have been fumigated. Children may be taken into workplaces, such as hairdressing salons, where they can wander into storage areas or work areas where chemicals are used. Children may not be able to read or understand warning signs.

Confined spaces

Children may wish to play and explore in areas such as storage tanks, silos, pits, sewers, wells, and other confined spaces. Children may enter confined spaces without the knowledge of adults, and possibly become locked in them.

Operation of plant

In situations where children have access to workplaces, they may be able to place their small hands and fingers into the gaps between parts of a machine, including guards designed for adult hands. They may also climb on or play with machines and may be caught by clothing or struck by machinery. It may be difficult for the operator of a vehicle to see children because of their smaller size.

If keys are left in vehicles, tractors or other machinery, they may be turned on as part of play activity. Riding in the back of work vehicles, such as trucks and utilities or trailers should be prohibited, as it increases the risk of falls or being thrown from the vehicle if there is a collision.

Extreme heat and cold

Children visiting workplaces may enter restricted areas, such as large freezers, and become locked in if no one knows they are there. They may also enter areas where kilns or ovens are used and not realise that some surfaces are hot to touch.

Sunburn

The risk of sunburn may be increased for children who may be less likely to follow instructions to limit sun exposure or to use protective clothing and sunscreen lotions. As the effects of skin damage due to sun exposure are long term, the effects often do not become evident until later in life.

Infections and diseases

Young children tend to place objects in their mouths and want to play with anything that is bright and colourful or noisy. Children in workplaces, such as hospitals and doctors surgeries, may explore treatment rooms that are left open. They face the risk of needle stick injuries if they play with waste containers.

Work with animals

Because of their lack of experience and small size, children and young visitors may be particularly at risk when they come into contact with animals. Animal behaviour is often unpredictable. Infection and disease may also be an issue if appropriate hygiene precautions are not followed. On rural properties where animals are kept, the stockyards, the watering troughs, tanks and dams are hazardous places, especially for young children who are unsupervised.

4.4 Controlling workplace health and safety risks for children

When selecting the best way to control exposure to the risk of death, injury and illness for children at workplaces, persons conducting a business or undertaking must work through the risk management process described in the *How to Manage Work Health and Safety Risks Code of Practice*.

Supervision is necessary, but there can be too much emphasis on this as a way of controlling exposure to risks for children. In some situations, the hazards can be eliminated and this is always the best option. Physical barriers, such as locked cupboards and storage areas, and guards minimise exposure to the risk for children entering dangerous areas at times when there is no supervision or when the implemented controls fail. These control measures are particularly effective in situations where children are living in the workplace.

If it is reasonable to expect that children will be at a workplace at any time for any reason, there should be clear ground rules about entry and supervision. Everyone at the workplace should know what the rules are and there should be a system to ensure the rules are followed. Unexpected or unplanned entry to workplaces should also be considered.

5. Managing the health and safety of children and young workers at workplaces

The Act and the Regulation require persons who have health and safety duties to ‘manage risks’ by eliminating health and safety risks so far as is reasonably practicable. If it is not reasonably practicable to eliminate the risks, persons with health and safety duties are required to minimise those risks so far as is reasonably practicable.

A safe and healthy workplace does not happen by chance or guesswork. It requires the person conducting the business or undertaking to think about what could go wrong at his or her workplace and to consider what the consequences could be. The person conducting the business or undertaking must then do whatever he or she can (in other words, whatever is ‘reasonably practicable’) to eliminate or minimise health and safety risks arising from their business or undertaking.

The *How to Manage Work Health and Safety Risks Code of Practice* describes the risk management process and provides information on how this process should be undertaken. The special characteristics of children and young workers at the workplace can affect health and safety. These characteristics are described in sections 3 and 4 of this code of practice and should be considered when undertaking the risk management process.

The risk management process needs to be undertaken:

- Before a young person begins work.
- To manage the risks to children who may enter or be in the workplace (including children who may live in the workplace).

For more information on how to use the risk management approach to meet workplace health and safety duties, please refer to the *How to Manage Work Health and Safety Risks Code of Practice*.

6. Training and induction for young workers

Under the Act, persons conducting a business or undertaking have a duty to provide workers with information, training, instruction or supervision that is necessary to protect all persons from risks to their health and safety. In addition, the Regulation requires that the information, training and instruction be provided in a way that is readily understandable by any person to whom it is provided. This section of the code of practice will assist persons conducting a business or undertaking to meet this duty. It will look at what information should include in induction and training for young workers.

Persons conducting a business or undertaking should provide information, training, instruction or supervision in a form appropriate to young workers. Young workers can not be put into a new job and automatically be expected to work safely. Nor is it enough to simply provide young workers with a workplace health and safety booklet, as they may not read or understand it. Language and literacy levels also need to be taken into account when providing young workers with information and instruction.

Knowledge and experience

People often make judgements based on some knowledge or experience of hazards and the safest way to deal with them. Over time, what they know about safety grows because of the variety of experiences they have, at home, at school, at play and at work. These things are not always learned in formal training courses.

Young workers usually have limited knowledge and a limited range of experiences. Before a young person begins work, persons conducting a business or undertaking should identify the gaps in their knowledge and assess their ability to work safely. Competency should be tested. It is not sufficient to accept a young worker's assurance that he or she is experienced and competent. Driving vehicles and riding motorbikes in off-road situations is one example where competency testing is needed before a young person begins these work activities.

Due to the high levels of risk involved with some activities, information, training, instruction, or supervision are of utmost importance in preventing injury and illness for young workers. Inexperienced workers require increased levels of information, training, instruction or supervision than experienced workers.

6.1 Induction of workers

Workplace health and safety induction provides workers with the initial information, training, instruction or supervision needed to function safely and effectively on the job.

Inductions are an opportunity to instil a positive attitude to workplace health and safety, especially when reinforced by the positive attitudes of management and other workers. A worker's experiences in the first few weeks on a new job or task will shape their attitudes to their work, the workplace and their co-workers. Inductions provide an opportunity to positively influence existing workers and people new to the business through the provision of information, training, instruction or supervision. This will assist in creating an efficient, productive and safe workforce.

Induction is much more than just having a brief chat with a young worker on their first day. Most inductions occur over a period of weeks, and are the basis for ongoing training. Time spent showing a worker the correct and safest way to do a job will be returned to the business or undertaking through effective work, efficient workers and fewer injuries.

Workplace health and safety inductions for new workers should occur as soon as is reasonably practicable following commencement of employment. The induction should cover a variety of topics including:

- a general overview of work health and safety law, including duties
- the workplace health and safety responsibilities of the position including, if relevant, duties in relation to risk management and staff supervision
- general safety and housekeeping procedures
- off-limit areas
- emergency procedures
- how to use and maintain equipment
- any specific conditions and prohibitions on the use of equipment
- any special safety information needed, such as safety precautions for working under specific conditions, or how to use safety devices such as emergency stop buttons
- inspection and maintenance programs in place at the workplace, such as when to request maintenance and who to ask
- instruction in any specific tasks e.g. maintenance of plant
- procedures for reporting injuries, illnesses and 'near misses'
- personal safety, including proper work clothing and personal protective equipment such as correct footwear
- proper use, wear, storage and maintenance of personal protective equipment

- specific hazards that may be encountered during work, and demonstrated safe working procedures
- the organisation's workplace health and safety program or policy
- the workplace health and safety risk management process
- the control measures in place to minimise exposure to the risks associated with workplace hazards, the correct use of these controls and how to ensure they are kept in full working order
- the meaning or intent of safety signs used at the workplace
- the safe use of hazardous chemicals, including how to access Safety Data Sheets (SDSs)
- how to access workplace health and safety resources and obtain good advice on general and specific safety topics.

The level of training required will depend on the:

- degree of risk involved with each task
- worker's previous experience in the industry
- worker's current skills and abilities (before training), and
- nature of the hazards involved.

Where relevant, the worker should be introduced to the:

- Health and Safety Representative (if one has been elected to the worker's workgroup)
- fire warden, and
- first aid officer.

Persons conducting a business or undertaking should keep records of all training provided to workers. Competency of workers to work safely may be tested through practical demonstrations and written or verbal assessments.

The person conducting the business or undertaking should determine what training is appropriate for the workplace and the type of work activity. Training can be formal or informal; in a classroom situation or on-the-job. The training should cover the hazards that have been identified at the workplace and what steps have been taken to reduce exposure to the risk of death, injury or illness. It should also cover the consequences of failing to follow safety instructions. Training should focus on the end result; that is, to have workers who have the skills and knowledge to work safely. The training should be evaluated to ensure this result has been achieved.

Inducting young workers

Persons conducting a business or undertaking should ensure that young workers understand what they are being told and shown during workplace inductions. They should encourage young workers to ask questions. The following steps will assist in this regard:

- give young workers clear instructions and ask them to repeat the instructions. Encourage young workers, particularly those workers with language or literacy needs, to ask questions
- show the new worker how to do the task, emphasising the main points
- supervise the new worker while they perform the task, and correct any mistakes
- ask questions as you go, and give the young worker an opportunity to ask questions and raise issues
- follow up the worker with frequent visits, and
- remember training is an ongoing process.

To assist with the induction program, organisations should have a documented induction program covering all risks present in the workplace. This will avoid inadequate ad-hoc induction training being undertaken.

Duties of young workers

Induction programs should also inform young workers about their duties as a worker under the Act. It is important for young workers to understand when they start work that, as workers, they have certain legal duties under the Act. The duties of workers under the Act include the following:

- (a) take reasonable care for his or her own health and safety
- (b) take reasonable care that his or her acts or omissions do not adversely affect the health and safety of other persons
- (c) comply, so far as the worker is reasonably able, with any reasonable instruction that is given by the person conducting the business or undertaking to allow compliance with the Act
- (d) cooperate with any reasonable policy or procedure of the person conducting the business or undertaking relating to health and safety at the workplace which has been notified to workers

The right to refuse work

Induction programs should inform young workers that under the Act, workers have a duty not to expose themselves to risk. Therefore workers should also be informed that they have a corresponding right under the Act to cease work that is unsafe. Specifically, any worker who believes that carrying out a certain task would expose him or her to a serious risk to health or safety emanating from an immediate or imminent exposure to a hazard, has a right under the Act to refuse to perform that task until exposure to the risk has been managed. Young workers should know what to do and who to contact if they believe there is a serious safety problem, i.e. report it to their Health and Safety Representative or supervisor. Workers should also be made aware of procedures for reporting hazards and resolving safety issues in their workplace.

6.2 Ongoing information, training, instruction and supervision

The workplace health and safety induction given to workers will provide most of the initial information, training and instruction for workers to commence work safely. Persons conducting a business or undertaking should continue to provide ongoing safety information, training, instruction or supervision. It is not a “once only” process for young workers who are new to the job. If the work is changed in any way, additional information, training, instruction or supervision should be provided to make sure young workers’ safety knowledge and skills are up-to-date. Persons conducting a business or undertaking should adequately supervise workers to ensure they are carrying out the tasks in accordance with the training that has been provided.

High-risk tasks will require more in-depth information, training, instruction or supervision. Workers should not perform high-risk tasks until they can demonstrate relevant knowledge, skills and experience. Persons conducting a business or undertaking should ensure that workers are adequately trained to undertake the tasks they are required to perform. Persons conducting a business or undertaking should assess, or have someone on their behalf assess the worker’s competency to ensure they are satisfied that the worker can safely perform the task. When performing high-risk tasks, young workers should always be accompanied by another competent person.

Workers may be required to receive training in relation to specific tasks, especially where these tasks have not been performed for a prolonged period.

Persons conducting a business or undertaking should ensure a record of all training provided to workers is kept at the workplace. Records should include:

- names of persons who received training
- dates of the training sessions
- skills taught
- outline of the course content
- names of the persons who provided the training and their qualifications, and
- tasks to be performed once training has been delivered.

If training occurs away from the usual place of work, supervisors should know about the content of the training programs so they are able to check on whether the young worker is putting classroom safety lessons into practice.

It is up to each person conducting a business or undertaking to decide on what training is appropriate for the workplace, depending on the type of work performed at the workplace. There should be prior consultation with all relevant parties. Training should focus on the end result, which is to have a young worker who has the skills and knowledge to work safely. The training should be evaluated to ensure that it achieves this result.

Due to their lack of experience in workplaces, young workers may have difficulty raising problems with their supervisors. Persons conducting a business or undertaking should take steps to reassure young workers and encourage open discussion about situations where they feel they are at risk of injury or harm.

Training, and the attitude to safety, has to be consistent across the workforce. Persons conducting a business or undertaking need to engender a culture of health and safety across their workplaces. If older workers don't use safety gear, then why should young workers? Everyone needs to reinforce this culture of safety in the workplace.

The following appendices are provided for information only, and do not form part of the code of practice.

Appendix 1 sets out some of the factors which can be taken into account to maintain the safety of children and young workers on farms.

Appendix 2 sets out a safety checklist for children on rural workplaces.

Appendix 1: Safety for children in rural workplaces

In rural workplaces, children are commonly exposed to workplace hazards which are not present in urban homes. There are many different hazards on rural workplaces which can have severe or fatal consequences for children. The safety of children is always an adult responsibility – primarily of the parent or carer, but also a shared responsibility. Under the Act, persons who conduct a business or undertaking at a rural workplace or persons who conduct a business or undertaking who has management or control of a rural workplace have responsibilities to all visitors, including children. These responsibilities also apply to children living on a rural property.

In general, these persons conducting a business or undertaking should:

- Ensure older children actually have the mental development to identify risk situations and the physical development to operate controls before allowing them to operate machinery.
- Ensure children wear hearing protection if they operate or are required to be near noisy machinery or equipment.
- Ensure children wear appropriate personal protective equipment (such as helmets) when on bikes and all terrain vehicles (ATVs).
- Ensure children wear seatbelts or restraints when riding in vehicles on the farm, and do not ride in the back of utes or trailers.
- Ensure all chemicals and explosives are locked away from access by children.
- Keep workshops locked and only allow children to enter under adult supervision.
- Child-proof fence the house yard to separate small children from animals, vehicles, moving machinery and road traffic.
- Secure storage bins, silos and underground tanks to prevent young children accessing them during play activities.
- Prohibit children from entering animal enclosures and paddocks containing animals. Ensure that young children are closely supervised by an adult at all times if they are going to enter a paddock containing livestock.

Safe and secure play area

Creating a safe and secure play area for children to safely play is the most effective way to prevent major injuries to children on rural workplaces. Safe play areas, such as a securely fenced house yard, separate children from dips, dams, machinery, road traffic and other farm hazards. Safe play areas stop children from easily moving from the house to the rural workplace without the knowledge or approval of an adult. Safe play areas can also help in stopping hazards (such as horses, cattle and traffic) from coming near children.

Safe play areas are practical and can be relatively low cost. Most importantly, safe and secure play areas, supported by 'out of bounds' rules and active supervision, are the most effective way to meet workplace health and safety duties under the Act.

To complement the effectiveness of the safe and secure play area:

- Develop family rules on 'out of bounds' areas and activities for children on the rural workplace. Adults should consistently reinforce these rules.
- Ensure the safe play area has shade and interesting things to entertain the children to discourage them from looking for entertainment on the rural workplace.
- Ensure small children have an adult with them when they are outside the safe play area.
- Ensure older children tell an adult where they are going on the rural workplace.

- For more information on safe and secure play areas, please visit the Farmsafe Australia website: www.farmsafe.org.au.

All terrain vehicles and farm bikes

All terrain vehicles (ATVs) and farm bikes can be hazardous. These vehicles are used for work and recreation, and are capable of reaching high speeds. Injuries generally tend to be due to rider error. The risk of injuries is much greater among inexperienced ATV riders than those who have received training. If children are using ATVs and farm bikes, they should have proper instruction, and be fully able to control the machine they are operating.

In accordance with the manufacturers' instructions, children under 16 should not ride adult-sized ATVs. Adult-sized ATVs are not designed for safe riding by children.

Persons conducting a business or undertaking at, or persons conducting a business or undertaking with management or control of a rural workplaces should ensure:

- Passengers do not ride on ATVs or farm bikes (unless the ATV has a designated passenger seat), as passengers restrict the rider from adopting an active or dynamic riding style necessary as an aid to cornering and when riding up and down slopes.
- Riders wear appropriate personal protective equipment such as helmets, goggles, gloves, enclosed footwear and clothing that covers both arms and legs when operating an ATV or farm bike.
- ATVs and farm bikes only have attachments that are compatible to the bike's specifications.
- Riders of ATVs and farm bikes are appropriately trained, particularly in the riding characteristics and the use of the ATV or farm bike, in the different types of terrain and riding conditions they are likely to encounter in the workplace.
- ATVs or farm bikes in need of repair are not used.

Hazardous chemicals

Persons conducting a business or undertaking at, or persons conducting a business or undertaking with management or control of rural workplaces should ensure:

- Chemicals are stored in their correctly labelled containers and cleaned out after use. Chemicals should never be stored in food or drink containers.
- Chemicals are kept locked in cupboards or separate stores out of reach of children and separate from family living areas.
- Children are kept away from areas where chemicals are being sprayed or used.

For more information on the safe use of chemicals, please refer to the *Hazardous Chemicals Code of Practice*, the *Labelling of Workplace Hazardous Chemicals Code of Practice* and the *Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice*.

Firearms

Some basic requirements concerning firearm safety are outlined below. For further information, please refer to the *Weapons Regulation 1996*. This regulation can be accessed at the website of the Office of the Queensland Parliamentary Counsel: www.legislation.qld.gov.au.

Persons conducting a business or undertaking at, or persons conducting a business or undertaking with management or control of rural workplaces must ensure:

- Guns are stored in locked steel or solid timber cabinets that are securely bolted to the wall or floor.
- Guns, magazines and bullets are always stored in separate locked places.

- Guns are transported in locked containers.

Ladders

Owners and managers of rural workplaces should ensure:

- Ladders are stored away to discourage children from climbing onto structures such as roofs and trees, and risk falling.
- Ladders fixed to structures such as silos or tank stands are guarded, and are raised at least 1.8 metres above ground, to prevent children attempting to climb them.

Machinery

Many incidents involving children happen around machinery on rural workplaces. Owners and managers of rural workplaces should ensure:

- Machinery is not left with the engine running without adult supervision.
- Keys are removed from machinery when not in use, and stored in a separate locked location.
- All machinery is fitted with appropriate safety guards.

For more information on the safe operation of machinery and plant, please refer to the *Rural Plant Code of Practice* and the *Plant Code of Practice*.

Tractors

A tractor is one of the most dangerous pieces of machinery on a rural workplace. Tractors must be fitted with rollover protective structures (ROPS).

Persons conducting a business or undertaking at, or persons conducting a business or undertaking with management or control of rural workplaces should ensure:

- Children do not ride in tractors as passengers unless there is a safe, secure seat with a seat belt within the zone protected by the ROPS.
- Children do not play or ride on tractors, even when not in use.
- Parking brakes should be set securely when tractors are stopped.
- Any three-point linkage or hydraulic implements attached to the tractor are placed on the ground when the tractor is parked.
- If tractors are stored in an area or a shed that is accessible by children, then keys and starting devices should be removed from machinery when not in use.

For more information about the safe use of tractors, please refer to the *Safe Design and Operation of Tractors Code of Practice*.

Water hazards

Water hazards such as animal water troughs, low-set rainwater tanks, animal dips, dams and wells are common on rural workplaces. Children under the age of five years are at particular risk of drowning and these risks need to be managed.

Persons conducting a business or undertaking at, or persons conducting a business or undertaking with management or control of rural workplaces should ensure:

- Children and their supervising adults are aware of all water hazards near the house, and fencing and other barriers are adequate to keep small children contained in a safe play area where they can't access water hazards.
- Water hazards situated within walking or crawling distance of a house should be fenced or barricaded with lids, mesh or guards to prevent access by small children.

- Other water hazards, such as open post holes or buckets and containers are covered to prevent access by a small child.
- Unused animal dips and ditches are filled in.

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Appendix 2: Safety checklist for children on rural workplaces

Is it safe for children?	Yes/No	Action to be taken?
<p>1. Water Is the house yard adequately fenced with a child-proof fence so that a small child can not access water hazards, such as swimming pools, nearby dams, irrigation channels, troughs, creeks etc. situated near the house?</p> <p>Are dips, tanks, wells and troughs near the house fitted with lids or mesh, and are unused dips and ditches filled in?</p>		
<p>2. Chemicals Are chemicals stored and adequately locked out of reach of children?</p> <p>Are chemical mixing and wash down bays adequately sited away from the farm house?</p> <p>Are effluent pits and drainage sumps adequately fenced and guarded to prevent access by children?</p> <p>Are chemicals always stored in appropriate containers (i.e. the original, labelled packaging), and not in food or drink containers?</p>		
<p>3. Silos or grain storage Are fixed ladders to silos, bins, tank stands etc. adequately guarded and raised at least 1.8 metres above ground level to prevent children from attempting to climb them?</p> <p>Are children and other unauthorised persons permitted near grain storage areas or grain handling activities?</p>		
<p>4. Firearms/explosives Are all firearms and ammunition stored separately and securely locked out of reach of children?</p> <p>Are all explosives locked away from access by children?</p>		

Is it safe for children?	Yes/No	Action to be taken?
<p>5. Machinery, equipment and appliances Do you prevent young children from entering the farm work area, especially around workshops, machinery storage areas, refuelling facilities etc.?</p> <p>If machinery and vehicle storage/parking areas are near the house, are tractors, trucks, ATVs, farm bikes and other machinery secured to prevent access or tampering by children?</p> <p>Do you prevent children from riding as passengers on tractors and mobile plant?</p> <p>Are there dangerous items of equipment or machinery left accessible to children?</p> <p>Are appliances and electrical tools left turned on or engaged and accessible to children? (e.g. machines with sharp or moving parts, old refrigerators etc).</p>		
<p>6. Animal pens and stock yards Do you prevent children from entering stock yards?</p>		
<p>7. Farm motorcycles and All Terrain Vehicles Are children appropriately trained and supervised when learning to ride farm motorcycles and All Terrain Vehicles (ATVs)?</p> <p>Do all riders wear a correctly fitting motorcycle helmet, long pants, and sturdy footwear when riding farm motorbikes?</p> <p>Does the rural workplace:</p> <ul style="list-style-type: none"> • Only allow children to ride an appropriately sized farm bike or ATV in accordance with manufacturer's recommendations? • Prevent passengers from riding on ATVs? 		

Guide to the Work Health and Safety Act 2011

Queensland

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This publication was produced by Workplace Health and Safety Queensland, Queensland Government using information originally developed by WorkSafe Victoria.

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Introduction

This guide provides an overview of the Queensland *Work Health and Safety Act 2011* (WHS Act). It is designed to help people understand their health and safety duties and rights in the workplace. However it is not intended to be read in place of the WHS Act. To assist readers, cross-references to specific sections of the WHS Act are provided after each heading.

It also provides information on:

- the requirements for consultation between business operators, worker representatives and workers;
- the notification of incidents; enforcement procedures;
- what constitutes an offence under the WHS Act and the range of penalties that apply.

Nationally uniform laws

Nationally uniform laws ensure workers in Australia have the same standard of health and safety protection, regardless of the work they do or where they work.

Nationally uniform work health and safety laws means greater certainty for employers (particularly those operating across state borders) and, over time, reduced compliance costs for business.

More consultation between employers, workers, and their representatives, along with clearer responsibilities will make workplaces safer for everyone.

Purpose of the WHS Act (section 3)

The WHS Act provides a framework to protect the health, safety and welfare of all workers at work and of all other people who might be affected by the work.

The WHS Act aims to:

- protect the health and safety of workers and other people by eliminating or reducing workplace risks

- ensure effective representation, consultation and cooperation to address health and safety issues in the workplace
- encourage unions and employers to take a constructive role in improving health and safety practices
- promote information, education and training on health and safety
- provide effective compliance and enforcement measures
- deliver continuous improvement and progressively higher standards of health and safety.

Throughout the WHS Act, the meaning of health includes psychological health as well as physical health.

Who is covered by the WHS Act?

Most workers in Australia are protected by nationally uniform work health and safety laws. This includes employees, contractors, sub-contractors, outworkers, apprentices and trainees, work experience students, volunteers and employers who perform work.

The WHS Act also provides protection for the general public so that their health and safety is not placed at risk by work activities.

What the Act will not apply to

The Act will not apply to the following:

- coal mining (*Coal Mining Safety and Health Act 1999*)
- metalliferous mining (*Mining and Quarrying Safety and Health Act 1999*)
- operating plant under the *Petroleum and Gas (Production and Safety) Act 2004*
- a facility or plant used for geothermal exploration under the *Geothermal Exploration Act 2004*
- where the *Electrical Safety Act 2002* applies
- where the *Transport Operations (Rail Safety) Act 2010* applies (i.e. prescribed railway operations)
- aviation safety.

In addition, the Act operates simultaneously with, but does not limit the operation of the following legislation:

- *Explosives Act 1999*
- *Petroleum and Gas (Production and Safety) Act 2004, in relation to construction work for a stage of operating plant, and the application of hazardous chemicals and major hazard facilities regulations to operating plant*
- *Public Safety Preservation Act 1986*
- *Radiation Safety Act 1999*
- *Transport Operations (Marine Safety) Act 1994 (Qld), Occupational Health and Safety (Maritime Industry) Act 1993 (Cth), Navigation Act 1912 (Cth) and the Navigation (Orders) Regulation 1980 (Cth)*
- *Transport Operations (Road Use Management) Act 1995.*

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WHS Regulation and Codes of Practice

(sections 274-276)

People with duties under the WHS Act should also refer to the Work Health and Safety Regulation 2011 (WHS Regulation) and Codes of Practice.

WHS Regulation

The WHS Regulation specifies the way in which a duty under the WHS Act must be performed and prescribes procedural or administrative matters to support the WHS Act (e.g. requiring licences for specific activities and the keeping of records).

Codes of Practice

Codes of Practice provide practical guidance on how to meet the standards set out in the WHS Act and the WHS Regulation. Codes of Practice can be used as evidence in legal proceedings to provide information on how a hazard or risk can be controlled or managed and to determine what was reasonably practicable in the circumstances discussed. They can also be referred to by an inspector when issuing an improvement or prohibition notice.

However, Codes of Practice are not mandatory and a duty holder may choose to use some other way to achieve compliance. Compliance with the WHS Act and the WHS Regulation may be achieved by following a method that is not set out in the Code of Practice. However, this other method must provide an equivalent or higher standard of work health and safety than suggested by the Code of Practice.

Definitions (sections 5-8)

The following terms are used throughout this guide:

Health and safety committee (HSC) – a group including workers, HSRs and PCBUs (see definition below) that facilitates cooperation between a PCBU and workers to provide a safe place of work.

Health and safety representative (HSR) – a worker who has been elected by a work group to represent them on health and safety issues.

Officer – an officer within the meaning of section 9 of the *Corporations Act 2001 (Cth)* other than a partner in a partnership. Broadly, an officer is a person who makes, or participates in making, decisions that affect the whole, or a substantial part, of the organisation's activities. An elected member of a municipal council acting in that capacity is not an officer of the municipal council. Similarly, a minister of a state, territory or the Commonwealth is not an officer of a responsible agency of the state, territory or Commonwealth.

An officer can also be an officer of the Crown or a public authority if they are a person who makes, or participates in making, decisions that affect the whole, or a substantial part, of the business or undertaking of the Crown or public authority.

Person conducting a business or undertaking (PCBU) – a person conducting a business or undertaking alone or with others, whether or not for profit or gain. A PCBU can be a sole trader (for example a self-employed person), a partnership, company, unincorporated association or government department of public authority (including a municipal council). An elected member of a municipal council acting in that capacity is not a PCBU.

Note - A volunteer association working for one or more community purposes which does not employ a worker does not conduct a business or undertaking for the purpose of this Act.

Note - A strata title body corporate that is responsible for any common areas used only for residential purposes and which does not employ a worker does not conduct a business or undertaking for the purpose of this Act.

Person with management or control – a PCBU with management or control over the workplace.

Plant – any machinery, equipment, appliance, container, implement or tool.

Structure – anything that is constructed, whether fixed or moveable, temporary or permanent and includes buildings, masts, towers, framework, pipelines, transport infrastructure and underground works (shafts or tunnels).

Substance – any natural or artificial substance in the form of a solid, liquid, gas or vapour.

Supply – supply and re-supply of a thing provided by way of sale, exchange, lease, hire or hire purchase arrangement.

Volunteer – a person who acts on a voluntary basis regardless of whether they receive out of pocket expenses.

Worker – employees, contractors, subcontractors, outworkers, apprentices and trainees, work experience students, volunteers and PCBUs who are individuals if they perform work for the business.

Work group – a group of workers who share similar work conditions (e.g. all the electricians in a factory; all people on night shift; all people who work in the loading bay of a retail storage facility).

Workplace – any place where work is carried out for a business or undertaking. This may include offices, factories, shops, construction sites, vehicles, ships, aircraft or other mobile structures on land or water such as offshore units and platforms.

Reasonably practicable (section 18)

The guiding principle of the WHS Act is that all people are given the highest level of health and safety protection from hazards arising from work, so far as is reasonably practicable.

The term ‘reasonably practicable’ means what could reasonably be done at a particular time to ensure health and safety measures were in place.

In determining what is reasonably practicable, there is a requirement to weigh up all relevant matters including:

- the likelihood of a hazard or risk occurring (i.e. the probability of a person being exposed to harm)
- the degree of harm that would result if the hazard or risk occurred (i.e. the potential seriousness of injury or harm)
- what the person concerned knows, or ought to reasonably know, about the hazard or risk and ways of eliminating or minimising it
- the availability of suitable ways to eliminate or minimise the hazard or risk
- the cost of eliminating or minimising the hazard or risk.

Ordinarily, cost will not be the key factor in determining what it is reasonable for a duty holder to do unless it can be shown to be 'grossly disproportionate' to the risk. If the risk is particularly severe, a PCBU will need to demonstrate that costly safety measures are not reasonably practicable due to their expense and that other less costly measures could also effectively minimise the risk.

Work health and safety duties

General principles (sections 13-17)

The WHS Act outlines the general health and safety duties of PCBUs, officers of companies, unincorporated associations, government departments and public authorities (including local governments), workers and other people at a workplace.

These general duties require the duty holder to ensure health and safety, so far as is reasonably practicable, by eliminating risks to health and safety. If this is not possible, risks must be minimised so far as is reasonably practicable.

Shared duties (section 16)

A person may have more than one duty. For example, the working director of a company has duties as an officer of the company and also as a worker.

More than one person may have the same duty. For example, each director on the Board of Directors of a company will owe a duty. In such cases, all directors are each fully responsible for that duty.

Duties of a PCBU

Primary duty of care (section 19)

The WHS Act requires all PCBUs to ensure the health and safety of workers, so far as is reasonably practicable. Workers include volunteers, contractors and contractors' workers.

PCBUs also have the same duty of care to any other people who may be at risk from work carried out by the business.

A self-employed person must ensure his or her own health and safety while at work, so far as is reasonably practicable.

General duties (sections 19-26)

The WHS Act sets out specific duties which a PCBU must comply with as part of their general duty so far as is reasonably practicable. These include:

- providing and maintaining a working environment that is safe and without risks to health, including the entering and exiting of the workplace
- providing and maintaining plant, structure and systems of work that are safe and do not pose health risks (e.g. providing effective guards on machines and regulating the pace and frequency of work)
- ensuring the safe use, handling, storage and transport of plant, structure and substances (e.g. toxic chemicals, dusts and fibres)
- providing adequate facilities for the welfare of workers at workplaces under their management and control (e.g. washrooms, lockers and dining areas)
- providing workers with information, instruction, training or supervision needed for them to work safely and without risks to their health
- monitoring the health of their workers and the conditions of the workplace under their management and control to prevent injury or illness
- maintaining any accommodation owned or under their management and control to ensure the health and safety of workers occupying the premises.

In addition, a PCBU with management or control of a workplace must ensure, so far as is reasonably practicable, that the workplace, the means of entering and exiting the workplace and anything arising from the workplace do not affect the health and safety of any person.

Similarly, a PCBU with management or control of fixtures, fittings or plant at a workplace must ensure, so far as is reasonably practicable, that the fixtures, fittings and plant do not affect the health and safety of any person.

PCBU who installs, erects or commissions plant or structures must also ensure all workplace activity relating to the plant or structure including its decommissioning or dismantling is without risks to health or safety.

Duty to consult (sections 46 - 49)

A PCBU has a duty to consult with workers and HSRs about matters that directly affect them. This extends to consulting with contractors and their workers, employees of labour hire companies, students on work

experience, apprentices and trainees, as well as with the PCBU's own employees and volunteer workers.

There may be a number of different duty holders involved in work (e.g. suppliers, contractors and building owners). If more than one person in the workplace has a health and safety duty they must consult all other people with the same duty. Each duty holder must share information in a timely manner and cooperate to meet health and safety obligations.

Duty of officers (section 27)

It is the duty of an officer of a PCBU to exercise due diligence to ensure the PCBU complies with its health and safety duties and obligations. An officer may be charged with an offence under the WHS Act independently of any breach of duty by the PCBU.

Due diligence includes personally taking reasonable steps to:

- acquire and keep current information on work health and safety matters
- understand the nature and operations of the work and associated hazards and risks
- ensure the PCBU has, and uses, appropriate resources and processes to eliminate or reduce risks to health and safety
- ensure the PCBU has appropriate processes to receive and consider information about incidents, hazards and risks, and to respond in a timely manner
- ensure the PCBU has, and implements, processes for complying with their duties and obligations (e.g. reports notifiable incidents, consults with workers, complies with notices, provides training and instruction and ensures HSRs receive training entitlements).

Duty of workers (section 28)

While at work, workers are required to take reasonable care for their own health and safety and that of others who may be affected by their actions or omissions. They must also cooperate with any reasonable instruction given by the PCBU and any reasonable policy or procedure of the PCBU to comply with the WHS Act and WHS Regulation.

Duties of other persons at the workplace (section 29)

Any person at a workplace, including customers and visitors, must take reasonable care of their own health and safety and that of others who may be affected by their actions or omissions. They must also cooperate with any actions taken by the PCBU to comply with the WHS Act and WHS Regulation.

Further duties of upstream PCBUs (designers, manufacturers, importers and suppliers)

Designers, manufacturers, importers and suppliers of plant, structures or substances can influence the safety of these products before they are used in the workplace. These people have a responsibility, so far as is reasonably practicable, to ensure these products are without risks to the health and safety of people who are at or near the workplace.

Duty holder	Duty to ensure health and safety in the workplace	Duty to test	Duty to provide information
Designers of plant, structures or substances (section 22)	A PCBU who is a designer of a plant, structure or substance that is to be used, or could reasonably be expected to be used, at a workplace must ensure all workplace activity relating to the plant, structure or substance, including its handling or construction, storage, dismantling and disposal is designed to be without risks to health or safety.	A designer of the plant, structure or substance must carry out tests and examinations sufficient to ensure that when used for its intended purpose it is safe and without risks to health or safety.	Information must be made available to those for whom the plant, structure or substance was designed about its intended purpose, test results and any conditions necessary to ensure that it is safe and without risks to health or safety, when used for its intended purpose.

Duty holder	Duty to ensure health and safety in the workplace	Duty to test	Duty to provide information
<p>Manufacturers of plant, structures or substances (section 23)</p>	<p>A PCBU who is a manufacturer of any plant, structure or substance which is manufactured to be used, or could reasonably be expected to be used, at a workplace must ensure all workplace activity relating to the plant, structure or substance, including its handling, storage and disposal or dismantling is without risks to health or safety when used for its intended purpose.</p>	<p>Manufacturers must carry out or arrange tests and examinations sufficient to ensure that the plant, structure or substance is manufactured to be safe and without risks to health or safety when used for a purpose for which it was manufactured.</p>	<p>Information must be given to any person who will use the plant, structure or substance about the purpose for which it was manufactured, test results and any conditions necessary to ensure that when used for its intended purpose it is safe and without risks to health or safety.</p>
<p>Importers of plant, substances or structures (section 24)</p>	<p>A PCBU who is an importer of any plant, substance or structure which is to be used, or could reasonably be expected to be used, at a workplace must ensure all workplace activity relating to the plant, structure or substance, including its handling, storage and disposal or dismantling is without risks to health or safety when used for its intended purpose.</p>	<p>Importers must carry out or arrange tests and examinations sufficient to ensure that the imported plant, structure or substance is safe and without risks to health or safety when used for its intended purpose.</p> <p>Alternatively importers must ensure that these tests and examinations have been carried out.</p>	<p>Information must be given to any person who will use the plant, structure or substance about the purpose for which it was imported, test results and any conditions necessary to ensure that when used for its intended purpose it is safe and without risks to health or safety.</p>

Duty holder	Duty to ensure health and safety in the workplace	Duty to test	Duty to provide information
Duties of suppliers of plant, substances or structures (section 25)	A PCBU who is a supplier of any plant, substance or structure that is to be used, or could reasonably be expected to be used, at a workplace must ensure all workplace activity relating to the plant, structure or substance, including its handling, storage and disposal or dismantling is without risks to health or safety when used for its intended purpose.	Suppliers must carry out or arrange tests and examinations sufficient to ensure that the supplied plant, structure or substance is safe and without risks to health or safety when used for its intended purpose. Alternatively suppliers must ensure that these tests and examinations have been carried out.	Information must be given to any person who will use the plant, structure or substance about the purpose for which it was supplied, test results and any conditions necessary to ensure that when used for its intended purpose it is safe and without risks to health or safety.

Incident notification (sections 35-39)

A PCBU must notify Workplace Health and Safety Queensland as soon as they become aware of a death, or a serious injury or illness that results in:

- immediate hospital treatment as an in-patient
- immediate medical treatment for injuries (e.g. amputation, scalping, a spinal injury, loss of a bodily function or a serious laceration, burn, head or eye injury), or
- medical treatment within 48 hours of exposure to a substance.

A serious illness (regulation 669) is:

- any infection to which the carrying out of work is a significant contributing factor, including any infection that is reliably attributable to carrying out work:
 - (i) with micro-organisms
 - (ii) that involves providing treatment to a person
 - (iii) that involves contact with human blood or body substances, or

- (iv) involves handling or contact with animals, animal hides, skins, wool or hair, animal carcasses or animal waste products.
- the following occupational zoonoses contracted in the course of work involving handling or contact with animals, animal hides, skins, wool or hair, animal carcasses or animal waste products:
 - (i) Q fever
 - (ii) Anthrax
 - (iii) Leptospirosis
 - (iv) Brucellosis
 - (v) Hendra Virus
 - (vi) Avian Influenza
 - (vii) Psittacosis.

Workplace Health and Safety Queensland must also be immediately notified of any dangerous incident that exposes a person to a serious health or safety risk from immediate or imminent exposure to:

- the uncontrolled escape, spillage or leakage of a substance
- an uncontrolled implosion, explosion or fire
- an uncontrolled escape of gas, steam or a pressurised substance
- an electric shock
- the fall or release from height of any plant, substance or thing
- the collapse, overturning, failure or malfunction of, or damage to, plant that is required to be licensed or registered
- the collapse or partial collapse of a structure, including an excavation or of any shoring supporting an excavation
- the inrush of water, mud or gas into an underground excavation or tunnel
- the interruption of the main system of ventilation to an underground excavation or tunnel
- other incidents as stated in the WHS Regulation.

Notice of an incident must be given by the fastest possible means. If notice is given by telephone, Workplace Health and Safety Queensland may request a written notice of the incident. This must be provided within 48 hours of the request and the PCBU must keep a copy of this record for at least five years.

The person with management or control of a workplace at which a notifiable incident has occurred must ensure the site of the incident is not disturbed until an inspector arrives at the site or directs otherwise. This does not prevent any action required to protect a person's health or safety, help someone who is injured or make the site safe.

Other notifications

In addition to the notification of incidents, PCBUs are required to notify Workplace Health and Safety Queensland of the following matters:

- licensed asbestos removal work (licensed asbestos removalist)
- asbestos fibre levels greater than 0.02 f/ml (licensed asbestos removalist – for Class A removal work)
- asbestos emergency work - domestic premises (PCBU with management or control of the workplace – for demolition work)
- asbestos emergency work - non-domestic premises (PCBU who is to carry out the demolition work – for demolition work)
- lead risk work commencing
- changes to information regarding lead risk work
- worker who is removed from carrying out lead risk work
- health monitoring reports
- abandoned tanks
- pipelines
- demolition work
- Schedule 11 hazardous chemicals exceeding manifest quantities at a workplace
- Schedule 15 hazardous chemicals exceeding 10 per cent of their threshold quantity.

Consultation with workers and representation of workers

Consultation, cooperation and coordination (sections 46-49)

Consultation is a collaborative process between the PCBU and any workers undertaking work within or for the business or undertaking. It involves sharing information about health and safety. PCBUs must give workers who are, or are likely to be, directly affected by a matter relating to health and safety, a reasonable opportunity to express their views or raise issues. If an HSR is representing workers, the consultation must involve them.

A PCBU must consult with workers when:

- identifying hazards and assessing risks arising from work
- proposing changes that may affect the health and safety of workers
- carrying out activities prescribed by the WHS Regulation.

A PCBU must also consult with workers and take their views into account when making decisions about:

- ways to eliminate or minimise risks
- the adequacy of facilities for workers' welfare
- procedures for consulting workers
- resolving health and safety issues
- monitoring the health and safety of workers or workplace conditions
- how to provide health and safety information and training to workers.

Workers are entitled to:

- elect a health and safety representative
- request the formation of a health and safety committee
- cease unsafe work

- have health and safety issues resolved in accordance with an agreed issue resolution procedure
- not be discriminated against for raising health and safety issues.

Health and safety representatives

An HSR represents the health and safety interests of a work group. There can be as many HSRs and deputy HSRs as needed after consultation, negotiation and agreement between workers and their employers.

A PCBU must keep a current list of all HSRs and deputy HSRs and display a copy at the workplace.

Work groups (sections 50-57)

Any worker or group of workers can ask the PCBU for whom they are carrying out work to set up a work group at one or more workplaces for the purpose of electing an HSR.

A work group is a group of workers who share a similar work situation. For example, a work group might consist of all workers in the office part of a manufacturing complex, or it might consist of people of the same trade, or it might consist of all people on the night shift. If agreed, workers from multiple businesses can be part of the same work group which might include contractors, labour hire staff, outworkers and apprentices.

If a request is made for the election of an HSR, a PCBU must start negotiations with workers within 14 days. Negotiations between a PCBU and workers will determine the:

- number and composition of the work group(s)
- number of HSRs and deputy HSRs
- workplace(s) to which the work group(s) apply.

A PCBU must negotiate a work group with a worker's representative (e.g. union) if asked by a worker. The PCBU must also notify workers as soon as practicable of the outcome of the negotiations.

At any time, the parties to a work group agreement may negotiate a variation.

If negotiations fail in establishing a work group, or discussing a variation to a work group agreement, any person who is a party to the negotiations can request an inspector to assist in deciding the matter (or, if the matter involves multiple businesses, to assist the negotiations).

Powers and functions (section 68-69)

The role of an HSR is generally limited to their work group unless there is a serious risk to the health or safety of other workers from an immediate hazard or a worker in another work group asks for their assistance, and the HSR for that other work group is found to be unavailable.

An HSR can:

- inspect the workplace or any area where work is carried out by a worker in the work group
- accompany a workplace health and safety inspector during an inspection of the area the HSR represents
- be present at an interview with a worker that the HSR represents (with their consent) and the PCBU or an inspector about health and safety issues
- request a health and safety committee be established
- monitor compliance measures by the PCBU
- represent the work group in health and safety matters
- investigate complaints from members of the work group
- inquire into any risk to the health or safety of workers in the work group
- direct a worker to cease unsafe work.

An HSR is not personally liable for anything done, or not done, in good faith while carrying out their role.

Election and eligibility (sections 50, 60-67)

The members of a work group elect their own HSR. All members are able to vote in an election. To be eligible for election, a person must be a member of the work group and not be disqualified from acting as an HSR.

Upon a request for the election of an HSR, a PCBU must provide resources and assistance to carry out the election. Members of a work group decide how to elect an HSR. Elections for a deputy HSR are carried out in the same way.

The term of office for an HSR or deputy HSR is three years. They cease to hold office if:

- they leave the work group
- they are disqualified from being an HSR
- they resign as an HSR
- the majority of members of the group agree the person should no longer represent them.

HSRs can be re-elected. Elections are not needed when the number of candidates is the same as the number of vacancies.

Any person adversely affected by a decision or action of an HSR can apply to the Queensland Industrial Relations Commission to have them disqualified.

Training (section 72)

If requested, a PCBU must allow HSRs and deputy HSRs to attend a work health and safety course approved by Workplace Health and Safety Queensland.

Within three months of the request, the PCBU must give HSRs paid time off to attend a course and pay the course costs and reasonable expenses. A course must be selected in consultation with the PCBU to ensure it is relevant to the work carried out. If agreement cannot be reached, an inspector may assist.

The PCBU has a duty to ensure the relevant training has been provided to the HSR so that they can perform their functions and exercise their powers under the WHS Act. Before the HSR can issue a provisional improvement notice (PIN) or give a direction to cease unsafe work, they must attend an approved training course.

Whether or not the HSR has undergone training, a PCBU must give them the resources, facilities and assistance to enable them to carry out their functions.

Provisional improvement notices (sections 90-102)

If an HSR reasonably believes that a person is contravening, or has contravened the WHS Act in circumstances that make it likely that the contravention will continue or be repeated, they must consult with the person before issuing a provisional improvement notice (PIN).

A PIN must be in writing and include:

- that the HSR believes the WHS Act is being contravened or has been contravened in circumstances that make it likely that the contravention will continue or be repeated
- the section of the WHS Act considered to have been contravened and how the section is being or has been contravened
- the date (at least eight days from the issue date) by which the contravention must be remedied.

A PIN can include directions on how to remedy a contravention. These directions may refer to a Code of Practice and offer the person a choice of solutions.

If a PCBU receives a PIN they must display it in a prominent place in the workplace, or part of the workplace, at which work is being carried out that is affected by the notice.

Within seven days of being issued with a PIN, any person (or the PCBU if the person issued with the PIN is a worker), can ask Workplace Health and Safety Queensland to review the notice. An inspector will attend the workplace to confirm the notice, confirm it with changes or cancel it. A confirmed PIN must be complied with.

The inspector will give a copy of their decision to the person who applied for the review and the HSR who issued the notice.

Health and safety committees (sections 75-79)

A health and safety committee (HSC) facilitates cooperation between a PCBU and workers in developing and carrying out measures to ensure health and safety at work. This includes health and safety standards, rules and procedures for the workplace.

A PCBU must set up an HSC within two months of being requested to do so by an HSR, or by five or more workers in a workplace or when required by the WHS Regulation.

A PCBU can also establish an HSC on their own initiative.

At least half of the members of an HSC must be workers that have not been nominated by the PCBU. An HSR can also consent to be a member of the committee and, when a workplace has more than one HSR, they can choose one or more to be members.

When agreement cannot be reached on the composition of an HSC, any party to the committee can request an inspector's assistance to decide the matter.

An HSC must meet at least once every three months and at any reasonable time at the request of at least half of the members of the committee.

Right to cease unsafe work (sections 83-89)

If a worker has a reasonable concern about a serious risk to their health or safety from immediate or imminent exposure to a hazard, they may cease or refuse to carry out work.

A worker who ceases work must notify the PCBU as soon as possible. Workers can be redirected to suitable alternative work at their workplace or at another site until they can resume normal duties.

If a HSR has a reasonable concern that the health and safety of a worker who is in a work group represented by the HSR is at serious risk, the HSR can give a direction to the worker to cease work. The risk must emanate from an immediate or imminent exposure to a hazard.

The HSR must, before giving such a direction, consult the PCBU and attempt to resolve the matter using the issue resolution process under section 81 of the WHS Act. However, if the risk is serious or imminent that it would not be reasonable to consult before giving a direction, the HSR can give a direction without consulting first. A HSR must also inform the PCBU of any directions given by them to workers.

HSRs cannot give directions to cease unsafe work unless they have completed training in accordance with section 72 of the WHS Act.

A PCBU, worker or HSR may request an inspector to attend the workplace and assist in resolving an issue with the cessation of work.

Issue resolution (sections 80-82)

If there is a health and safety issue at a workplace, the relevant parties must make reasonable efforts to achieve a timely, final and effective resolution of the issue in accordance with an agreed procedure or the default procedure set out in the WHS Regulation.

Relevant parties are:

- the PCBU or their representative
- each PCBU or their representative, if the issue involves more than one PCBU
- the HSR for that work group or his/her representative, if the worker(s) affected by the issue is/are in a work group
- the worker(s) or his/her representative, if the worker(s) affected by the issue is/are not in a work group.

A person's representative may enter the workplace for the purpose of attending discussions with a view to resolving the issue.

If an issue remains unresolved, one of the parties may ask Workplace Health and Safety Queensland to appoint an inspector to attend the workplace and assist in resolving the issue.

Such a request does not prevent a worker from ceasing unsafe work or an HSR from issuing a PIN.

Although an inspector cannot determine the issue, the inspector may exercise any of his/her compliance powers under the WHS Act.

Discriminatory, coercive or misleading conduct

(sections 104-115)

A person must not dismiss, terminate a contract with, refuse to hire or detrimentally alter the position of a worker, or treat them less favourably, because they:

- are, were or propose to be a member of an HSC or perform a function in this capacity
- are, were or propose to be an HSR or exercise a power or perform a function in this capacity
- exercised a power or performed a function (or refrained from doing so)
- assisted a person to exercise a power or perform a function
- raised a health and safety issue with a PCBU, inspector, entry permit holder, HSR, member of an HSC or another worker
- are involved in resolving a work health and safety issue
- acted to get another person to comply with their duties.

A person is also engaging in discriminatory conduct if they terminate or refuse to enter a commercial arrangement with another person for these reasons.

It is unlawful to engage in, threaten or organise to take any of the above actions, or to ask or encourage another person to do this.

These provisions create both criminal and civil causes of action in the event of such conduct. In addition, they do not preclude actions being taken under other relevant state and federal laws that deal with discrimination including the *Anti Discrimination Act 1991* and the *Fair Work Act 2009* (Cth).

Entry permit holders (section 131-137, 149)

A WHS entry permit holder is a union official who has completed an approved training course and holds a valid and current entry permit under the Commonwealth *Fair Work Act 2009* or the Queensland *Industrial Relations Act 1999*. An entry permit allows the holder to investigate suspected contraventions of the WHS Act, meet with workers and exercise their legal rights under WHS Act. Permits are valid for three years from the date of issue or cease when the permit holder ceases to be a union official. A permit must be returned within 14 days of expiry.

Workplace health and safety entry permit holders must show their identification upon request.

Suspected contraventions (sections 117-120, 144-146)

A workplace health and safety entry permit holder may enter a workplace during working hours to inquire into a contravention if they reasonably suspect one has or is occurring. While there, they may inspect any work or thing that directly relates to the matter, talk to any worker who is entitled to be represented by the union and warn anyone they believe is exposed to a serious health or safety risk.

They may consult with the PCBU about the matter and request to look at, and make copies of, relevant records or documents kept at the workplace in hard copy or on a computer. A PCBU must not, without reasonable excuse, refuse or fail to comply with this request, however they do not have to make records available if this breaches the *Privacy Act 1988* (Cth).

When inquiring into a suspected contravention, an entry permit holder can also inspect or make copies of employee records that are directly relevant to the contravention or other documents that are directly relevant that are not held by that PCBU. In this case at least 24 hours notice of the entry must be given to the person from whom the documents are requested, the relevant PCBU and the person with management and control of the workplace.

A person must not, without reasonable excuse, refuse or unduly delay a permit holder's entry to a workplace, or obstruct them from exercising their rights.

Consulting workers (sections 121-130)

An entry permit holder may enter a workplace to consult or provide

advice to workers on health and safety matters. At least 24 hours notice must be given to the PCBU and the person with management and control of the workplace before the entry.

Disputes (sections 141-143)

Any party to a dispute about a right of entry may ask Workplace Health and Safety Queensland to appoint a workplace health and safety inspector to attend the workplace to assist with resolving the matter.

Alternatively, or if the matter remains unresolved, the dispute may be dealt with by the Queensland Industrial Relations Commission (QIRC). The QIRC may deal with a dispute on its own initiative or on the application of an entry permit holder, the relevant union, Workplace Health and Safety Queensland, a PCBU or another person affected by the exercise of right of entry powers. The QIRC may deal with a dispute in any way it determines, including mediation, conciliation or arbitration.

Revoking a permit (section 138-140)

An entry permit may be revoked by the QIRC if a holder breaches permit conditions or engages in improper behaviour. Workplace Health and Safety Queensland, a PCBU or anyone affected by the actions of a permit holder can apply in writing to have it revoked. The QIRC can make orders including imposing conditions on a permit, or suspending or revoking a permit.

The regulator, inspectors and enforcement

Role of the regulator (sections 152-155)

Each state, territory and the Commonwealth will continue to have its own regulator to administer the nationally uniform laws in their jurisdiction.

Workplace Health and Safety Queensland has a broad range of functions including to:

- monitor and enforce compliance with the WHS Act and WHS Regulation
- provide advice and information on work health and safety to duty holders, including PCBUs and workers, of their duties, obligations and rights under the WHS Act
- foster a cooperative, consultative relationship between duty holders and the people to whom they owe work health and safety duties, and their representatives
- promote and support work health and safety education and training
- engage in, promote and coordinate the sharing of information to achieve the object of the WHS Act, including the sharing of information with other regulators
- conduct and defend legal proceedings under the WHS Act
- collect, analyse and publish statistics relating to work health and safety
- promote public awareness and discussion of work health and safety to the community.

Power of the regulator to require documents and information (section 155)

If Workplace Health and Safety Queensland believes a person is capable of giving information or documents in relation to a possible contravention of the WHS Act, or that will assist in monitoring or compliance, Workplace Health and Safety Queensland can require the person to provide this after serving them with a written notice.

A person cannot refuse, or fail to comply with a request without a reasonable excuse. A person is not excused from answering a question or providing information or a document on the ground that the answer to the question, or the information or document, may tend to incriminate the person or expose the person to a penalty. However, the answer or information or document, and other evidence directly or indirectly derived from the answer, information or document is not admissible as evidence against that individual in criminal or civil proceedings other than proceedings arising out of the false or misleading nature of the answer, information or document.

Functions and powers of inspectors (sections 156,160-162)

Inspectors have the following functions and powers:

- to provide information and advice about how to comply with the law
- to help resolve work health and safety issues
- to help resolve right of entry disputes
- to review a disputed PIN
- to issue notices to require compliance with the law
- to investigate contraventions and assist to prosecute offences.

An inspector in a workplace may require a person to provide information about and access to a document, as well as answers to questions. While inspectors will be able to compel answers, the answers to questions or information provided cannot be used as evidence against that person in civil or criminal proceedings. Inspectors may also copy and retain documents and seize evidence.

Powers of entry (sections 163-166)

An inspector may enter a workplace, or a suspected workplace, at any time with or without the consent of the person with management or control. If it is not a workplace they must leave immediately.

An inspector must show their identification on request.

An inspector must advise the PCBU, person with management or control of the workplace and any HSR they have entered the workplace as soon as practicable. This is not needed if it would defeat the purpose of entry or cause unreasonable delay.

An inspector entering a workplace can:

- inspect, examine and make inquiries
- inspect, examine and seize anything, including documents
- bring and use any equipment or materials they may need
- take measurements, conduct tests, and make sketches or recordings (e.g. photographs, films, audio and video)
- take and remove samples for analysis.

A person may accompany an inspector to a workplace if they require assistance. An inspector can also require a person at a workplace to give them reasonable help to do these things. A person asked to assist must not, without reasonable excuse, refuse or fail to comply.

Search warrants (sections 167-169)

An inspector may apply to a magistrate for a search warrant. The magistrate must be satisfied there are reasonable grounds that there is, or may be within the next 72 hours, evidence of an offence against the WHS Act.

The warrant states the suspected offence, the evidence that may be seized, the time that the place may be entered, the date that the warrant ends and that the inspector may use reasonable help and force to enter the place and exercise their powers.

The authorised inspector must announce the warrant and give anyone at the place an opportunity to let them in before executing the warrant. This is not required if the inspector believes immediate entry is needed to ensure a person's safety or to avoid frustrating the execution of the warrant.

If the person with management or control of the workplace is present, the inspector must show their identification and provide a copy of the search warrant.

Enforcement measures

Improvement notices (sections 191-193)

An inspector may issue an improvement notice if they reasonably believe a person is contravening, or has contravened the WHS Act or WHS

Regulation in circumstances that make it likely that a contravention will continue or be repeated.

The notice will identify the provisions of the WHS Act that have or may have been contravened, the reasons for the notice, and a reasonable date to fix the contravention by. An improvement notice may also include directions and/or recommendations about how to fix or prevent a contravention.

A person issued with an improvement notice must comply.

Prohibition notices (sections 195-197)

An inspector may issue a prohibition notice if they reasonably believe an activity involves a serious risk to a person's health or safety from immediate or imminent exposure to a hazard.

The notice prohibits the activity continuing or being carried out in a specific way, and is issued to the person with control over the activity. It may include directions on how to remedy the risk and remains in place until an inspector is satisfied the risk has been fixed.

A person issued with a prohibition notice must comply.

Non-disturbance notices (sections 198-200)

If an inspector believes it is necessary to enable them to exercise their powers, they may issue a non-disturbance notice to the person with management or control of a workplace.

A notice may require the person to preserve the site or prevent disturbance for up to seven days, and must include the measures to be taken to do so. A person issued with a non-disturbance notice must comply.

Injunctions (section 215)

Workplace Health and Safety Queensland may apply to the Magistrates Court for an injunction to require or compel a person to comply with a notice, or to restrain them from contravening a notice. An injunction can be sought even if separate proceedings are underway about a matter to which the notice relates.

Infringement notices

Infringement notices ('on the spot' fines) may be issued by inspectors as an alternative to prosecution for prescribed offences.

An infringement notice can be withdrawn by the person who issued it within 28 days of issue. The withdrawal of an infringement notice does not prevent other proceedings in relation to the alleged offence (unless the penalty has already been paid even if refunded).

If the penalty imposed by an infringement notice is paid within the set time, no proceedings may be taken for the offence and no conviction recorded. A payment cannot be taken as an admission of guilt or liability for any future civil claim. Prosecution may take place if penalties are not paid.

Remedial action (sections 211-213)

If a person to whom a prohibition notice is issued fails to take reasonable steps to comply with the notice, Workplace Health and Safety Queensland may take any remedial action it believes is reasonable to make the workplace or situation safe.

The costs of undertaking the remedial action will be charged to the PCBU or the owner of the premises; however, they can only be recovered by Workplace Health and Safety Queensland if a notice has been given of Workplace Health and Safety Queensland's intention to take the action and the PCBU or owner's liability for the cost of that action.

Enforceable undertakings (sections 216-222)

Workplace Health and Safety Queensland may accept a work health and safety undertaking given by a person in connection with a contravention or an alleged contravention of the WHS Act. However, a work health and safety undertaking cannot be accepted for a Category 1 offence.

An undertaking takes effect and becomes enforceable when Workplace Health and Safety Queensland's decision to accept it is given to the person.

A person who has made an undertaking may apply to Workplace Health and Safety Queensland to change or withdraw the undertaking.

An undertaking is not an admission of guilt.

If a person contravenes a work health and safety undertaking, Workplace Health and Safety Queensland may apply to the Magistrates Court. In addition to imposing a penalty for the breach, the court may make an order directing the person to comply with the undertaking or discharging the undertaking, as well as orders directing the person to pay the costs

of the proceedings and the reasonable costs of monitoring compliance with the undertaking in the future.

In addition if a person contravenes a work health and safety undertaking, Workplace Health and Safety Queensland may still commence proceedings for the contravention or alleged contravention of the WHS Act to which the work health and safety undertaking relates.

Review of decisions (sections 223-229)

Certain decisions made by inspectors and Workplace Health and Safety Queensland can be reviewed. The WHS Act outlines which decisions can be reviewed and who can apply to have them reviewed. These are decisions that relate to:

- the failure to commence negotiations for work groups
- union right of entry permits
- training of health and safety representatives
- provisional improvement notices issued by HSRs
- forfeiture and return of goods or things
- issue of improvement, prohibition or non-disturbance notices and subsequent notices
- variation or cancellation of notices
- extension of time to comply with improvement notices.

Internal review

Inspectors' decisions are initially subject to internal review by Workplace Health and Safety Queensland. The internal reviewer cannot be the person responsible for the initial decision. The internal reviewer must make a decision within 14 days after receiving an application, unless the reviewer receives further information from the applicant. The internal reviewer must decide whether to confirm the initial decision, vary it, or set it aside in favour of another course of action. A written decision must be sent to the applicant as soon as practicable.

If an application for review is made this generally imposes a stay on the operation of the decision until there is an outcome. However, for decisions relating to prohibition and non-disturbance notices, a separate application to stay the decision must also be made, or the reviewer

can make a decision to stay the operation of the notice on their own initiative. A decision on an application for a stay on the operation of a prohibition notice or a non-disturbance notice must be made within one working day after the reviewer receives the application, otherwise the reviewer is taken to have made a decision to grant a stay.

A stay operates until the time allowed for making an external review expires or an application for external review is made.

External review

If a person is dissatisfied with the internal review decision, they may apply for an external review of that decision.

Decisions relating to:

- the failure to commence negotiations for work groups
- union right of entry permits
- training of HSRs

are reviewable by the Queensland Industrial Relations Commission.

Decisions relating to:

- provisional improvement notices issued by HSRs
- forfeiture and return of goods or things
- issue of improvement, prohibition or non-disturbance notices and subsequent notices
- variation or cancellation of notices
- extension of time to comply with improvement notices

are reviewable by the Queensland Civil and Administrative Tribunal.

In addition, decisions made under the WHS Act by Workplace Health and Safety Queensland are subject to external review.

Offences and penalties (sections 30-34)

Workplace Health and Safety Queensland and inspectors can take legal proceedings for any offence under the WHS Act. In addition, the Director of Public Prosecutions may also initiate proceedings for Category 1 offences.

Health and safety duty offences

The WHS Act provides for three categories of offences for breach of health and safety duties and outlines the maximum penalties that apply to an individual, a PCBU, a worker or an officer of a corporation or unincorporated association, and to a body corporate.

Category 1 – a duty holder engages in conduct that recklessly exposes a person to a risk of death or serious injury or illness. This offence is a crime and will be prosecuted in the District Court.

Category 2 – a duty holder fails to comply with a health and safety duty that exposes a person to risk of death or serious injury or illness.

Category 3 – a duty holder fails to comply with a health and safety duty.

Proceedings for Category 2 and 3 offences will be taken summarily in the Magistrates Court.

Volunteers are exempt from prosecution for failure to comply with a health and safety duty owed by a PCBU (ss.19-26) or an officer of a corporation or unincorporated association (s.27). Volunteers are, however, liable for duties owed as workers (s.28) or other people at a workplace (s.29).

An unincorporated association is also exempt from prosecution. However, an officer of the unincorporated association (other than a volunteer) may be prosecuted for a failure to comply with an officer's duty (s.27) and a member of the association may be prosecuted for failure to comply with the duty of a worker (s.28) or of another person at a workplace (s.29).

Procedure if prosecution is not brought

If a person considers a Category 1 or 2 offence has occurred and no prosecution has been brought between six and twelve months of the alleged contravention, they can request that Workplace Health and Safety Queensland bring a prosecution.

Workplace Health and Safety Queensland has three months to advise its decision. If the decision is not to prosecute, a person may make a written request to Workplace Health and Safety Queensland to refer the matter to the Director of Public Prosecutions within one month.

The Director of Public Prosecutions must consider the matter and advise Workplace Health and Safety Queensland within one month whether a prosecution should be brought. Workplace Health and Safety Queensland must provide the person with a copy of the advice and, if Workplace Health and Safety Queensland declines the advice, the reasons why.

Penalties for breach of health and safety duty offences

Penalties for breach of health and safety duty offences are outlined in the following table:

	Corporation	Individual as PCBU or officer	Individual as worker or other
Category 1	\$3 million	\$600,000, five years jail or both	\$300,000, five years jail or both
Category 2	\$1.5 million	\$300,000	\$150,000
Category 3	\$500,000	\$100,000	\$50,000

Alternative penalty options

In addition to the above penalties, courts may impose additional or alternative sentencing options. Other types of orders that can be made against offenders include:

- adverse publicity orders
- restoration orders
- work health and safety project orders
- court ordered work health and safety undertakings
- injunctions
- training orders.

Section of the WHS Act	Type of order	Information
Section 236	Adverse publicity orders	The court may make an adverse publicity order requiring the offender to publicise the offence, its consequences and the penalty imposed. It may also direct an offender to notify a specified person or group of people about the offence. The offender may also need to give Workplace Health and Safety Queensland evidence the order was carried out as instructed.
Section 237	Restoration orders	The court may order the offender to take steps to remedy anything that occurred as a result of the offence that it decides the offender has the power to address. It may choose to extend the restoration period but only if the application is made before the order expires.
Section 238	Work health and safety projects	The court may make an order requiring the offender to undertake a project for the general improvement of work health and safety within a set period, with conditions that must be complied with as part of the project.
Section 239	Court ordered work health and safety undertakings	The court may adjourn legal proceedings for up to two years and make an order for the release of the offender on a work health and safety undertaking. The court may require the offender to: appear before it if required, not commit any offences under the WHS Act, and observe any special conditions imposed.
Section 240	Injunctions	If a court finds a person guilty of an offence against the WHS Act, it may issue an injunction requiring the person to cease contravening the WHS Act.
Section 241	Training orders	A person may be ordered by the court to undertake, or arrange for one or more workers to undertake, a specified training course.

Other offences

There are a number of other offences under the WHS Act that relate to specific requirements and carry their own individual penalties.

Offences in relation to incident notification (sections 38, 39)

It is an offence to:

- fail to notify a notifiable incident (s.38)

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- fail to preserve an incident site until an inspector arrives (s.39).

Offences in relation to authorisations (sections 41 – 45)

It is an offence to:

- carry on a business or undertaking at an unauthorised workplace (s.41)
- use unauthorised plant, equipment and substances at a workplace (s.42)
- carry out work without the required licence, permit or authorisation (s.43)
- carry out unsupervised work where supervision by a person with prescribed qualifications or experience is required (s.44)
- not comply with the conditions of any licence, permit or authorisation (s.45).

Offences in relation to consultation (sections 46, 47)

It is an offence to:

- not consult with other duty holders (s.46)
- not consult with workers (s.47).

Offences in relation to the establishment of work groups (sections 52 – 57)

It is an offence to:

- fail to negotiate with workers or their representative regarding the formation of work groups at a workplace (ss.52, 56)
- fail to notify workers of the outcome of negotiations regarding the formation of work groups at a workplace (ss.53, 57).

Offences in relation to health and safety representatives (sections 61, 70 – 74, 97, 99)

It is an offence to:

- fail to negotiate with an HSR on health and safety matters
- fail to provide an HSR with access to information regarding hazards and safety of workers
- fail to allow an HSR to attend interviews with an inspector or PCBU concerning health and safety issues

- fail to provide resources, facilities and assistance to elect an HSR and allow them to carry out their health and safety duties
- prevent an HSR from accompanying an inspector during an inspection of the workplace
- deny a person assisting an HSR access to the workplace providing the required notice of entry has been given
- fail to allow an HSR time off with pay to attend to their health and safety duties
- provide an HSR with access to personal or medical information of a worker without the worker's consent unless it is released in a form that does not identify the worker
- refuse to allow an HSR to attend a prescribed training course
- fail to provide an HSR with access to information relating to hazards at the workplace.
- fail to keep an up-to-date list of HSRs at the workplace and ensure it is readily accessible to all workers
- fail to display a provisional improvement notice (s.97)
- contravene a provisional improvement notice (s.99).

Offences in relation to health and safety committees (sections 75, 79)

It is an offence to:

- fail to establish an HSC within two months of being requested to do so (s.75)
- fail to allow members of the committee time off with pay to comply with their health and safety duties (s.79).

Offences in relation to discriminatory, coercive or misleading conduct (sections 104 – 108)

It is an offence to:

- engage in discriminatory conduct for a reason prohibited under the WHS Act (s.107)
- organise or take, or threaten to organise or take, any action against another person with intent to coerce or induce that person, or a third

person, to exercise or not exercise a power or perform or not perform a function under the WHS Act (s.108)

- knowingly or recklessly make a false or misleading representation to another person regarding their rights, obligations or abilities under the WHS Act (s.109).

Offences in relation to WHS entry permit holders (sections 118 – 151)

It is an offence for a person to:

- refuse or fail to provide documentation or information relating to a suspected breach of the WHS Act (s.118)
- refuse or unduly delay, or intentionally and unreasonably hinder or obstruct entry to a workplace by an entry permit holder (s.144, s.145).

It is an offence for a WHS entry permit holder to:

- contravene a condition of the WHS entry permit (s.123)
- enter a workplace unless they also hold an entry permit under the *Fair Work Act 2009 (Cth)* or an industrial officer authority (s.124)
- fail to have the work entry permit available for inspection (s.125)
- enter the workplace outside normal working hours and fail to comply with any reasonable request from the PCBU or person with management or control of the workplace (s.126)
- fail to comply with any reasonable request to comply with work health and safety requirements at the workplace (s.128)
- enter any part of the workplace that is only used for residential purposes (s.129)
- enter a workplace without giving the required notice of entry (s.143A)
- intentionally and unreasonably delay, hinder or obstruct any person or disrupt work at the workplace (s.146)
- give the impression that the taking of some action is authorised under the WHS Act when it is not (s.147)
- disclose information or a document about a suspected health and safety breach for a purpose that is not related to an inquiry (s.148)

- fail to return the permit to the authorising authority within 14 days of the permit expiring being revoked or suspended (s.149).

It is an offence for a union to:

- fail to notify the industrial registrar when the entry permit holder resigns and leaves the union, or the entry permit holder has previously had a permit cancelled or suspended, or the union ceases to be a registered organisation (s.150).

In addition, a person commits an offence if they contravene an order of the Queensland Industrial Relations Commission (QIRC) regarding a dispute about the exercise or purported exercise by a WHS permit holder of a right of entry under the WHS Act (s.143).

Offences in relation to the regulator and inspectors (sections 155 - 190)

It is an offence to:

- refuse or fail to answer questions and provide information and documentation requested by Workplace Health and Safety Queensland without reasonable excuse (s.155)
- refuse or fail to assist an inspector without reasonable excuse (s.165)
- refuse or fail to comply with an inspector's request to answer questions or produce a document without reasonable excuse (s.171)
- tamper with a thing the access to which has been restricted by an inspector (s.177)
- refuse or fail to comply with a direction from an inspector, including providing your name and address (s.185)
- intentionally hinder or obstruct an inspector while they are carrying out their duties, or to induce or attempt to induce another person to do so (s.188)
- impersonate an inspector (s.189)
- assault, threaten or intimidate an inspector or a person assisting an inspector (s.190)
- fail to comply with an improvement notice (s.193)
- fail to comply with a prohibition notice (s.197)

- fail to comply with a non-disturbance notice (s.200)
- intentionally remove, destroy, damage or deface a notice required to be displayed (s.210)
- fail to comply with a WHS undertaking (s.219)
- fail to comply with a court order (s.242)
- given false or misleading information (s.268)
- disclose confidential information obtained while exercising a power or function under the WHS Act (other than in relation to a permit holder entry to a workplace) (s.271)
- impose a levy or charge on a worker for anything done or provided in relation to work health and safety (s.272).

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Authorisations

Authorisations (e.g. licences, permits and registrations) are required for certain types of work, some workplaces and the use of some plant.

Workplaces (section 41)

The WHS Regulation requires some workplaces (e.g. major hazard facilities) to be approved or authorised. A person must not conduct a business or undertaking, or direct or allow a worker to carry out work, if the workplace is not authorised in accordance with the WHS Regulation.

Plant (section 42)

A PCBU must not direct or allow a worker to use plant or equipment if it is not authorised.

Under the WHS Regulation, the following items of plant require registration of their design:

- pressure equipment, other than pressure piping and heritage boilers
- gas cylinders covered by Part 1.1 of AS2030.1
- tower cranes, including self-erecting tower cranes (excluding cranes or hoists that are manually powered, scissor lifts, vertically moving platforms, reach stackers and tow trucks)
- lifts, including escalators and moving walkways
- building maintenance units
- hoists with a platform movement exceeding 2.4 metres, designed to lift people
- work boxes designed to be suspended from cranes
- amusement devices covered by section 2.1 of AS3533 (except Class 1 amusement devices, inflatable devices with a platform height less than 3 metres, playground structures, water slides, wave generators)
- concrete placing booms
- prefabricated scaffolding
- boom type elevating work platforms
- gantry cranes with a safe working load greater than 5 tonnes, or

bridge cranes with a safe working load of greater than 10 tonnes, and any gantry crane or bridge crane which is designed to handle molten metal or Schedule 11 hazardous chemicals

- vehicle hoists
- mast climbing work platforms
- mobile cranes with a rated capacity of greater than 10 tonnes.

Under the WHS Regulation the following items of plant and equipment are required to be registered:

- certain boilers and pressure vessels
- tower cranes, including self-erecting tower cranes (excluding cranes and hoists that are manually powered and reach stackers)
- lifts, including escalators and moving walkways
- building maintenance units
- amusement devices covered by section 2.1 of AS3533 (except Class 1 amusement devices, inflatable devices with a platform height less than 3 metres, playground structures, water slides, wave generators)
- concrete placing booms
- mobile cranes with a rated capacity of greater than 10 tonnes.

Work (section 43)

A PCBU must not direct or allow a worker to carry out work if it is required to be done by an authorised person. Under the WHS Regulation, the following high risk work must only be performed by people who have been authorised (i.e. licensed) to carry out that particular type of work:

- scaffolding
- dogging and rigging
- crane and hoist operation
- forklift operation
- pressure equipment operation.

Prescribed qualifications and experience (section 44)

The WHS Regulation requires the following types of work only to be carried out or supervised by a person with prescribed qualifications or experience:

Diving:

- general diving work (sections 171 and 177 WHS Regulation)
- incidental diving work (section 172 WHS Regulation)
- limited scientific diving work (section 173 WHS Regulation)
- high risk diving work (sections 183 and 184 WHS Regulation)

Plant:

- maintenance, repair, inspection and testing of registered mobile cranes and tower cranes (section 235 WHS Regulation)
- maintenance, repair, inspection and testing of amusement devices (sections 240 and 241 WHS Regulation)
- verification of plant design (section 252 WHS Regulation)

Construction:

- all construction work requires general construction induction training (sections 316 and 317 WHS Regulation)

Management of asbestos:

- identification of asbestos at a workplace (section 422 WHS Regulation)

Asbestos related work:

- air monitoring of the work area where asbestos related work is being carried out (section 482 WHS Regulation)

In the case of asbestos removal work, the WHS Regulation requires the:

- asbestos removalist to be licensed (section 458 WHS Regulation)
- asbestos removal supervisor for Class A (friable) asbestos removal work to meet specific training and experience requirements (section 493 WHS Regulation)
- asbestos removal supervisor for Class B (non-friable) asbestos removal work carried out by more than one person to meet specific training and experience requirements (section 529 WHS Regulation)
- workers carrying out licensed removal work to hold certification in relevant units of competency (section 460 WHS Regulation)
- clearance inspection for Class B (non-friable) asbestos removal work to be undertaken only by competent person (section 473 WHS Regulation)
- clearance certificate in relation to Class B (non-friable) asbestos removal work to be issued only by a competent person (section 474 WHS Regulation)
- air monitoring during Class A (friable) asbestos removal work to be undertaken only by a licensed asbestos assessor (section 489 WHS Regulation)
- clearance inspection for Class A (friable) asbestos removal work to be undertaken only by a licensed asbestos assessor (section 489 WHS Regulation)
- clearance certificate in relation to Class A (friable) asbestos removal work to be issued only by a licensed asbestos assessor (section 489 WHS Regulation).

Glossary

Authorised means authorised or approved by a licence, permit, registration or other authority as required by the WHS Regulation.

Dangerous incident means an incident in a workplace that exposes a worker or any other person to a serious risk to health and safety from an immediate hazard or one about to happen, for example a spillage, explosion or electric shock.

Discriminatory conduct means dismissing a worker, terminating their contract, altering a worker's position, or in any other way doing something to the detriment of the worker. It can also mean failing to engage a prospective worker, treating a prospective worker less favorably than another, terminating a commercial arrangement, or failing to enter into a commercial arrangement. Threatening to take any of this action is also discriminatory conduct.

Fair Work Act means the Commonwealth *Fair Work Act 2009*.

Health and safety duty means a duty relating to health and safety imposed in Part 2 of the WHS Act.

Inspector means an inspector appointed under Part 9 of the WHS Act

Internal reviewer means a person appointed by Workplace Health and Safety Queensland to review decisions made by inspectors.

Notifiable incident means an incident involving the death, serious injury or illness of a person, or a dangerous incident.

Official of a union means a person who holds an office in, or is employed by a registered trade union.

Prohibited reason means conduct referred to in section 106 of the WHS Act if it is engaged in because the worker, or prospective worker, has been, or proposes to be an HSR or a member of an HSC or exercises power in those roles, amongst other reasons, for example exercising

another power under the WHS Act but not as an HSR or HSC member.

Union means:

- an employee organisation that is registered, or taken to be registered, under the *Fair Work (Registered Organisations) Act 2009* (Cth)
- an employee organisation under the *Industrial Relations Act 1999* (Qld); or
- an association of employees or independent contractors, or both, registered as such under a state or territory industrial law.

WHS entry permit means a permit that can be issued to a union official, allowing them to enter a workplace to investigate a suspected contravention of the WHS Act.

WHS undertaking means a written undertaking given by a person (often the PCBU) to Workplace Health and safety Queensland relating to a breach or alleged breach of the WHS Act.

More information

To obtain a copy of the WHS Act, go to www.legislation.qld.gov.au

For further information visit www.worksafe.qld.gov.au or call the WHS Infoline on 1300 362 128.

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How to manage work health and safety risks

Code of practice 2011

This Queensland code of practice was made by the Minister for Education and Industrial Relations on 27 November 2011 and published in the Queensland Government Gazette on 2 December 2011.

This code commences on 1 January 2012.

This code is based on a national model code of practice developed by Safe Work Australia and approved by the Workplace Relations Ministers' Council on 10 August 2011 as part of the harmonisation of work health and safety laws.

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Foreword

This code of practice on how to manage work health and safety risks is an approved code of practice under section 274 of the *Work Health and Safety Act 2011* (the Act).

An approved code of practice is a practical guide to achieving the standards of health, safety and welfare required under the Act and the Work Health and Safety Regulations (the Regulations).

A code of practice applies to anyone who has a duty of care in the circumstances described in the code. In most cases, following an approved code of practice would achieve compliance with the health and safety duties in the Act, in relation to the subject matter of the code. Like Regulations, codes of practice deal with particular issues and do not cover all hazards or risks that may arise. The health and safety duties require duty holders to consider all risks associated with work, not only those for which Regulations and codes of practice exist.

Codes of practice are admissible in court proceedings under the Act and Regulations. Courts may regard a code of practice as evidence of what is known about a hazard, risk or control and may rely on the code in determining what is reasonably practicable in the circumstances to which the code relates.

Compliance with the Act and Regulations may be achieved by following another method, such as a technical or an industry standard, if it provides an equivalent or higher standard of work health and safety than the code.

An inspector may refer to an approved code of practice when issuing an improvement or prohibition notice.

This code of practice has been developed by Safe Work Australia as a model code of practice under the Council of Australian Governments' *Inter-Governmental Agreement for Regulatory and Operational Reform in Occupational Health and Safety* for adoption by the Commonwealth, state and territory governments.

A draft of this code of practice was released for public consultation on 7 December 2010 and was endorsed by the Workplace Relations Ministers' Council on 10 August 2011.

Scope and application

This code provides practical guidance for persons who have duties under the Act and Regulations to manage risks to health and safety. The duty is placed on persons conducting a business or undertaking, including employers, self-employed, principal contractors, persons with management or control of a workplace, designers, manufacturers, importers and suppliers of plant, substances or structures that are used for work.

This code applies to all types of work and all workplaces covered by the Act. Other approved codes of practice should be referenced for guidance on managing the risk of specific hazards.

How to use this code of practice

In providing guidance, the word 'should' is used in this code to indicate a recommended course of action, while 'may' is used to indicate an optional course of action.

This code also includes various references to sections of the Act and to Regulations which set out the legal requirements. These references are not exhaustive. The words 'must', 'requires' or 'mandatory' indicate that a legal requirement exists and must be complied with.

1. Introduction

1.1 Who has responsibility for managing work health and safety risks?

The Act and Regulations require persons who have a duty to ensure health and safety to 'manage risks' by eliminating health and safety risks so far as is reasonably practicable, and if it is not reasonably practicable to do so, to minimise those risks so far as is reasonably practicable.

Persons conducting a business or undertaking will have health and safety duties to manage risks if they:

- engage workers to undertake work for them, or if they direct or influence work carried out by workers
- may put other people at risk from the conduct of their business or undertaking
- manage or control the workplace or fixtures, fittings or plant at the workplace
- design, manufacture, import or supply plant, substances or structures for use at a workplace
- install, construct or commission plant or structures at a workplace.

Deciding what is 'reasonably practicable' to protect people from harm requires taking into account and weighing up all relevant matters, including:

- the likelihood of the hazard or risk concerned occurring
- the degree of harm that might result from the hazard or risk
- knowledge about the hazard or risk, and ways of eliminating or minimising the risk
- the availability and suitability of ways to eliminate or minimise the risk, and
- after assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.

The process of managing risk described in this code will help you decide what is reasonably practicable in particular situations so that you can meet your duty of care under the WHS laws.

Officers (for example company directors) must exercise due diligence to ensure that the business or undertaking complies with the Act and Regulations. This includes taking reasonable steps to:

- gain an understanding of the hazards and risks associated with the operations of the business or undertaking
- ensure that the business or undertaking has and uses appropriate resources and processes to eliminate or minimise risks to health and safety.

A person can have more than one duty and more than one person can have the same duty at the same time.

1.2 The meaning of key terms

Hazard means a situation or thing that has the potential to harm a person. Hazards at work may include: noisy machinery, a moving forklift, chemicals, electricity, working at heights, a repetitive job, bullying and violence at the workplace.

Risk is the possibility that harm (death, injury or illness) might occur when exposed to a hazard.

Risk control means taking action to eliminate health and safety risks so far as is reasonably practicable, and if that is not possible, minimising the risks so far as is reasonably practicable. Eliminating a hazard will also eliminate any risks associated with that hazard.

1.3 What is involved in managing risks?

Management commitment

Effective risk management starts with a commitment to health and safety from those who operate and manage the business or undertaking. You also need the involvement and cooperation of your workers, and if you show your workers that you are serious about health and safety they are more likely to follow your lead.

To demonstrate your commitment, you should:

- get involved in health and safety issues
- invest time and money in health and safety
- ensure health and safety responsibilities are clearly understood.

A step-by-step process

A safe and healthy workplace does not happen by chance or guesswork. You have to think about what could go wrong at your workplace and what the consequences could be. Then you must do whatever you can (in other words, whatever is 'reasonably practicable') to eliminate or minimise health and safety risks arising from your business or undertaking.

This process is known as *risk management* and involves the four steps set out in this Code (see Figure 1 below):

- **identify hazards** – find out what could cause harm
- **assess risks** if necessary – understand the nature of the harm that could be caused by the hazard, how serious the harm could be and the likelihood of it happening
- **control risks** – implement the most effective control measure that is reasonably practicable in the circumstances
- **review control measures** to ensure they are working as planned.

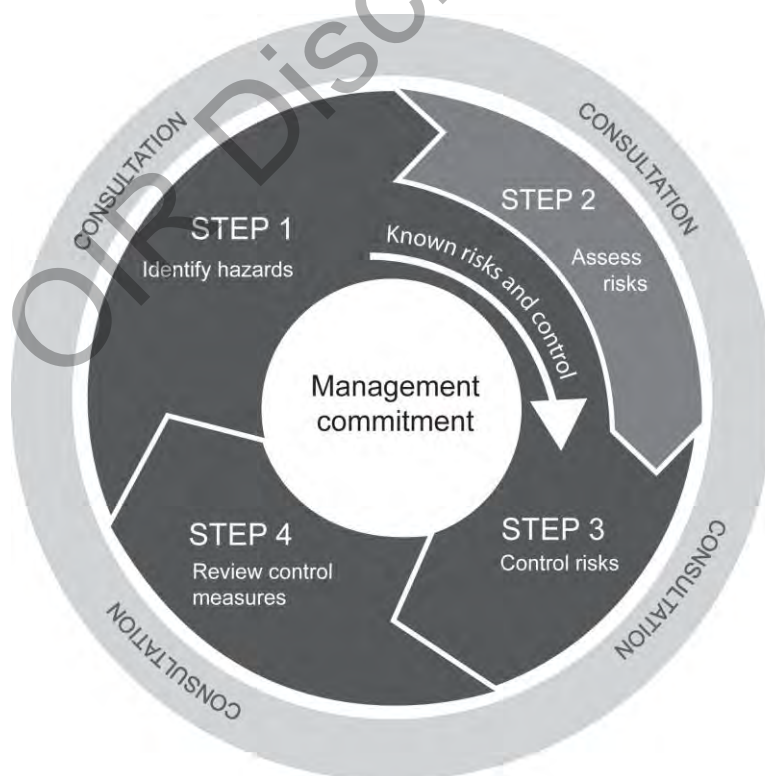


Figure 1: The risk management process

Many hazards and their associated risks are well known and have well established and accepted control measures. In these situations, the second step to formally assess the risk is unnecessary. If, after identifying a hazard, you already know the risk and how to control it effectively, you may simply implement the controls.

Risk management is a proactive process that helps you respond to change and facilitate continuous improvement in your business. It should be planned, systematic and cover all reasonably foreseeable hazards and associated risks.

Consulting your workers

Section 47: The Act requires that you consult, so far as is reasonably practicable, with workers who carry out work for you who are (or are likely to be) directly affected by a work health and safety matter.

Section 48: If the workers are represented by a health and safety representative, the consultation must involve that representative.

Consultation involves sharing of information, giving workers a reasonable opportunity to express views and taking those views into account before making decisions on health and safety matters.

Consultation with workers and their health and safety representatives is required at each step of the risk management process. By drawing on the experience, knowledge and ideas of your workers you are more likely to identify all hazards and choose effective control measures.

You should encourage your workers to report any hazards and health and safety problems immediately so that risks can be managed before an incident occurs.

If you have a health and safety committee, you should engage the committee in the risk management process as well.

Consulting, co-operating and co-ordinating activities with other duty holders

Section 46: The Act requires that you consult, co-operate and co-ordinate activities with all other persons who have a work health or safety duty in relation to the same matter, so far as is reasonably practicable.

Sometimes you may share responsibility for a health and safety matter with other business operators who are involved in the same activities or who share the same workplace. For example, if you engage on-hire workers as part of your workforce you share a duty of care to these workers with the business that provides them. In these situations, you must discuss the hazards and risks associated with the work and what precautions will be taken with the on-hire firm.

Never assume that someone else is taking care of a health and safety matter. Find out who is doing what and work together with other duty holders in a co-operative and co-ordinated way so that all risks are eliminated or minimised as far as reasonably practicable.

When entering into contracts you should communicate your safety requirements and policies, review the job to be undertaken, discuss any safety issues that may arise and how they will be dealt with. Remember that you cannot transfer your responsibilities to another person.

Further guidance on consultation is available in the *Code of practice: Work health and safety consultation, co-operation and co-ordination*.

1.4 When should a risk management approach be used?

Managing work health and safety risks is an ongoing process that is triggered when any changes affect your work activities. You should work through the steps in this code when:

- starting a new business or purchasing a business
- changing work practices, procedures or the work environment
- purchasing new or used equipment or using new substances
- planning to improve productivity or reduce costs
- new information about workplace risks becomes available
- responding to workplace incidents (even if they have caused no injury)
- responding to concerns raised by workers, health and safety representatives or others at the workplace
- required by the Regulations for specific hazards.

It is also important to use the risk management approach when designing and planning products, processes or places used for work, because it is often easier and more effective to eliminate hazards before they are introduced into a workplace by incorporating safety features at the design stage.

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2. Step 1 – How to identify hazards

Identifying hazards in the workplace involves finding things and situations that could potentially cause harm to people. Hazards generally arise from the following aspects of work and their interaction:

- physical work environment
- equipment, materials and substances used
- work tasks and how they are performed
- work design and management.

Table 1 below lists some common types of workplace hazards. Some hazards are part of the work process, such as mechanical hazards, noise or toxic properties of substances. Other hazards result from equipment or machine failures and misuse, chemical spills and structural failures.

A piece of plant, substance or a work process may have many different hazards. Each of these hazards needs to be identified. For example, a production line may have dangerous moving parts, noise, hazards associated with manual tasks and psychological hazards due to the pace of work.

Table 1: Examples of common hazards

Hazard	Potential harm
Manual tasks	Overexertion or repetitive movement can cause muscular strain
Gravity	Falling objects, falls, slips and trips of people can cause fractures, bruises, lacerations, dislocations, concussion, permanent injuries or death
Electricity	Potential ignition source. Exposure to live electrical wires can cause shock, burns or death from electrocution
Machinery and equipment	Being hit by moving vehicles, or being caught by moving parts of machinery can cause fractures, bruises, lacerations, dislocations, permanent injuries or death
Hazardous chemicals	Chemicals (such as acids, hydrocarbons, heavy metals) and dusts (such as asbestos and silica) can cause respiratory illnesses, cancers or dermatitis
Extreme temperatures	Heat can cause burns, heat stroke or fatigue Cold can cause hypothermia or frost bite
Noise	Exposure to loud noise can cause permanent hearing damage
Radiation	Ultra violet, welding arc flashes, micro waves and lasers can cause burns, cancer or blindness
Biological	Micro-organisms can cause hepatitis, legionnaires' disease, Q fever, HIV/AIDS or allergies
Psychosocial hazards	Effects of work-related stress, bullying, violence and work-related fatigue

2.1 How to find hazards

Inspect the workplace

Regularly walking around the workplace and observing how things are done can help you predict what could or might go wrong. Look at how people actually work, how plant and equipment is used, what chemicals are around and what they are used for, what safe or unsafe work practices exist as well as the general state of housekeeping.

Things to look out for include the following:

- Does the work environment enable workers to carry out work without risks to health and safety (for example, space for unobstructed movement, adequate ventilation, lighting)?
- How suitable are the tools and equipment for the task and how well are they maintained?
- Have any changes occurred in the workplace which may affect health and safety?

Hazards are not always obvious. Some hazards can affect health over a long period of time or may result in stress (such as bullying) or fatigue (such as shiftwork). Also think about hazards that you may bring into your workplace as new, used or hired goods (for example, worn insulation on a hired welding set).

As you walk around, you may spot straightforward problems and action should be taken on these immediately, for example cleaning up a spill. If you find a situation where there is immediate or significant danger to people, move those persons to a safer location first and attend to the hazard urgently.

Make a list of all the hazards you can find, including the ones you know are already being dealt with, to ensure that nothing is missed. You may use a checklist designed to suit your workplace to help you find and make a note of hazards.

Consult your workers

Ask your workers about any health and safety problems they have encountered in doing their work and any near misses or incidents that have not been reported.

Worker surveys may also be undertaken to obtain information about matters such as workplace bullying, as well as muscular aches and pains that can signal potential hazards.

Review available information

Information and advice about hazards and risks relevant to particular industries and types of work is available from regulators, industry associations, unions, technical specialists and safety consultants.

Manufacturers and suppliers can also provide information about hazards and safety precautions for specific substances (safety data sheets), plant or processes (instruction manuals).

Analyse your records of health monitoring, workplace incidents, near misses, worker complaints, sick leave and the results of any inspections and investigations to identify hazards. If someone has been hurt doing a particular task, then a hazard exists that could hurt someone else. These incidents need to be investigated to find the hazard that caused the injury or illness.

3. Step 2 – How to assess risks

A risk assessment involves considering what could happen if someone is exposed to a hazard and the likelihood of it happening. A risk assessment can help you determine:

- how severe a risk is
- whether any existing control measures are effective
- what action you should take to control the risk
- how urgently the action needs to be taken.

A risk assessment can be undertaken with varying degrees of detail depending on the type of hazards and the information, data and resources that you have available. It can be as simple as a discussion with your workers or involve specific risk analysis tools and techniques recommended by safety professionals.

3.1 When should a risk assessment be carried out?

A risk assessment should be done when:

- there is uncertainty about how a hazard may result in injury or illness
- the work activity involves a number of different hazards and there is a lack of understanding about how the hazards may interact with each other to produce new or greater risks
- changes at the workplace occur that may impact on the effectiveness of control measures.

A risk assessment is mandatory under the Regulations for high risk activities such as entry into confined spaces, diving work and live electrical work.

Some hazards that have exposure standards, such as noise and airborne contaminants, may require scientific testing or measurement by a competent person to accurately assess the risk and to check that the relevant exposure standard is not being exceeded (for example, by using noise meters to measure noise levels and using gas detectors to analyse oxygen levels in confined spaces).

A risk assessment is not necessary in the following situations:

- Legislation requires some hazards or risks to be controlled in a specific way – these requirements must be complied with.
- A code of practice or other guidance sets out a way of controlling a hazard or risk that is applicable to your situation and you choose to use the recommended controls. In these instances, the guidance can be followed.
- There are well-known and effective controls that are in use in the particular industry, that are suited to the circumstances in your workplace. These controls can simply be implemented.

3.2 How to do a risk assessment

All hazards have the potential to cause different types and severities of harm, ranging from minor discomfort to a serious injury or death.

For example, heavy liquefied petroleum gas (LPG) cylinders can cause muscular strain when they are handled manually. However, if the cylinder is damaged causing gas to leak which is then ignited, a fire could result in serious burns. If that leak occurs in a store room or similar enclosed space, it could result in an explosion that could destroy the building and kill or injure anyone nearby. Each of the outcomes involves a different type of harm with a range of severities, and each has a different likelihood of occurrence.

Work out how severe the harm could be

To estimate the severity of harm that could result from each hazard you should consider the following questions:

- What type of harm could occur (e.g. muscular strain, fatigue, burns, laceration)? How severe is the harm? Could the hazard cause death, serious injuries, illness or only minor injuries requiring first aid?
- What factors could influence the severity of harm that occurs? For example, the distance someone might fall or the concentration of a particular substance will determine the level of harm that is possible. The harm may occur immediately something goes wrong (e.g. injury from a fall) or it may take time for it to become apparent (e.g. illness from long-term exposure to a substance).
- How many people are exposed to the hazard and how many could be harmed in and outside your workplace? For example, a mobile crane collapse on a busy construction site has the potential to kill or injure a large number of people.
- Could one failure lead to other failures? For example, could the failure of your electrical supply make any control measures that rely on electricity ineffective?
- Could a small event escalate to a much larger event with more serious consequences? For example, a minor fire can get out of control quickly in the presence of large amounts of combustible materials.

Work out how hazards may cause harm

In most cases, incidents occur as a result of a chain of events and a failure of one or more links in that chain. If one or more of the events can be stopped or changed, the risk may be eliminated or reduced.

One way of working out the chain of events is to determine the starting point where things begin to go wrong and then consider: 'If this happens, what may happen next?' This will provide a list of events that sooner or later cause harm. See the case study in Appendix A.

In thinking about how each hazard may cause harm, you should consider:

- the effectiveness of existing control measures and whether they control all types of harm
- how work is actually done, rather than relying on written manuals and procedures
- infrequent or abnormal situations, as well as how things are normally meant to occur.

Consider maintenance and cleaning, as well as breakdowns of equipment and failures of health and safety controls.

Work out the likelihood of harm occurring

The likelihood that someone will be harmed can be estimated by considering the following:

- How often is the task done? Does this make the harm more or less likely?
- How often are people near the hazard? How close do people get to it?
- Has it ever happened before, either in your workplace or somewhere else? How often?

Table 2 contains further questions that can help you estimate likelihood.

You can rate the likelihood as one of the following:

- Certain to occur - expected to occur in most circumstances
- Very likely - will probably occur in most circumstances
- Possible – might occur occasionally
- Unlikely – could happen at some time
- Rare – may happen only in exceptional circumstances.

The level of risk will increase as the likelihood of harm and its severity increases.

Table 2	
Questions to ask in determining likelihood	Explanation and examples
How often are people exposed to the hazard?	<p>A hazard may exist all of the time or it may only exist occasionally. The more often a hazard is present, the greater the likelihood it will result in harm.</p> <p><i>For example:</i></p> <ul style="list-style-type: none"> Meshing gears in an enclosed gearbox can cause crushing only if the gearbox is open during maintenance, and therefore the potential for harm will not occur very often. Continuously lifting heavy boxes has the potential to cause harm whenever the work is done.
How long might people be exposed to the hazard?	<p>The longer that someone is exposed to a hazard, the greater the likelihood that harm may result.</p> <p><i>For example:</i></p> <p>The longer a person is exposed to noisy work, the more likely it is that they will suffer hearing loss.</p>
How effective are current controls in reducing risk?	<p>In most cases the risks being assessed will already be subject to some control measures. The likelihood of harm resulting from the risk will depend upon how adequate and effective the current measures are.</p> <p><i>For example:</i></p> <p>Traffic management controls have been implemented in a warehouse to separate moving forklifts from pedestrians by using signs and painted lines on the floor. These controls may need to be upgraded to include physical barriers.</p>
Could any changes in your organisation increase the likelihood?	<p>The demand for goods or services in many organisations varies throughout the year. Changes in demand may be seasonal, depend on environmental conditions or be affected by market fluctuations that are driven by a range of events. Meeting increased demand may cause unusual loads on people, plant and equipment and systems of work. Failures may be more likely.</p> <p><i>For example:</i></p> <p>Inner city restaurants and bistros are very busy in the period prior to Christmas, placing extra demands on kitchen and serving staff. The increase in volume of food to be prepared and serving a larger number of patrons increases the potential for human error and the likelihood of harm.</p>
Are hazards more likely to cause harm because of the working environment?	<p>Examples of situations where the risk of injury or illness may become more likely:</p> <ul style="list-style-type: none"> Environmental conditions change. For example, work performed in high temperatures in a confined space increases the potential for mistakes because workers become fatigued more quickly; wet conditions make walkways and other things slippery. People are required to work quickly. The rate at which work is done (e.g. number of repetitions) can over-stress a person's body or make it more likely that mistakes will be made. There is insufficient light or poor ventilation.
Could the way people act and behave affect the likelihood of a hazard causing harm?	<p>The possibility that people may make mistakes, misuse items, become distracted or panic in particular situations needs to be taken into account. The effects of fatigue or stress may make it more likely that harm will occur.</p>
Do the differences between individuals in the workplace make it more likely for harm to occur?	<p>People with disabilities may be more likely to suffer harm if the workplace or process is not designed for their needs.</p> <p>New or young workers may be more likely to suffer harm because of inexperience.</p> <p>People who do not normally work at the workplace will have less knowledge than employees who normally work there, and may be more likely to suffer harm. These people include contractors, visitors or members of the public.</p>

4. Step 3 – How to control risks

The most important step in managing risks involves eliminating them so far as is reasonably practicable, or if that is not possible, minimising the risks so far as is reasonably practicable.

In deciding how to control risks you must consult your workers and their representatives who will be directly affected by this decision. Their experience will help you choose appropriate control measures and their involvement will increase the level of acceptance of any changes that may be needed to the way they do their job.

There are many ways to control risks. Some control measures are more effective than others.

You must consider various control options and choose the control that most effectively eliminates the hazard or minimises the risk in the circumstances. This may involve a single control measure or a combination of different controls that together provide the highest level of protection that is reasonably practicable.

Some problems can be fixed easily and should be done straight away, while others will need more effort and planning to resolve. Of those requiring more effort, you should prioritise areas for action, focusing first on those hazards with the highest level of risk.

4.1 The hierarchy of risk control

The ways of controlling risks are ranked from the highest level of protection and reliability to the lowest as shown in Figure 2. This ranking is known as the hierarchy of risk control. The Regulations require duty holders to work through this hierarchy when managing risk under the Regulations.

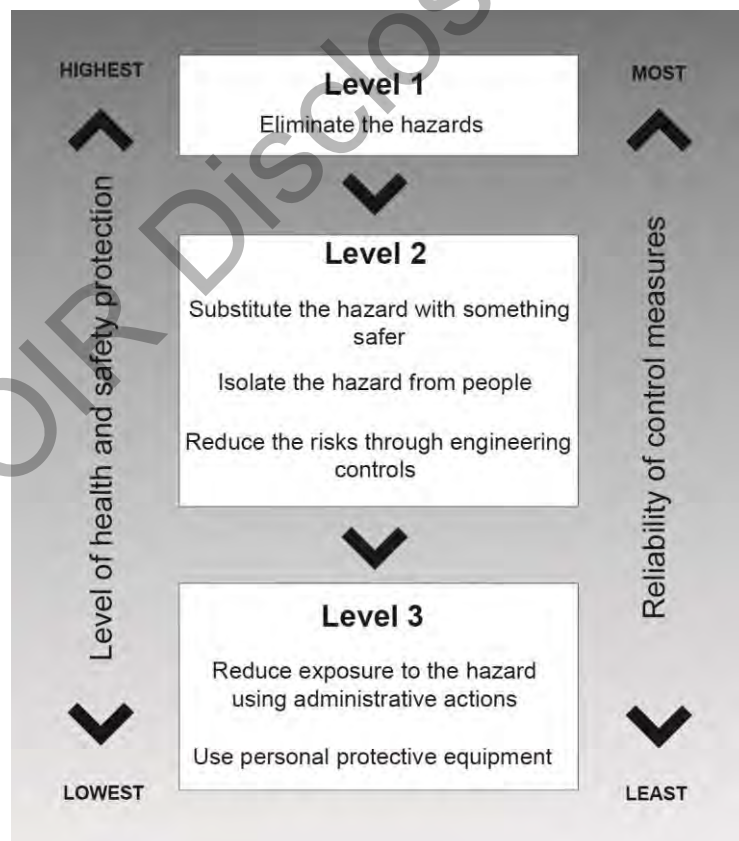


Figure 2: The hierarchy of risk control

You must always aim to eliminate a hazard, which is the most effective control. If this is not reasonably practicable, you must minimise the risk by working through the other alternatives in the hierarchy.

Level 1 control measures

The most effective control measure involves eliminating the hazard and associated risk. The best way to do this is by, firstly, not introducing the hazard into the workplace. For example, you can eliminate the risk of a fall from height by doing the work at ground level.

Eliminating hazards is often cheaper and more practical to achieve at the design or planning stage of a product, process or place used for work. In these early phases, there is greater scope to design out hazards or incorporate risk control measures that are compatible with the original design and functional requirements. For example, a noisy machine could be designed and built to produce as little noise as possible, which is more effective than providing workers with personal hearing protectors.

You can also eliminate risks by removing the hazard completely, for example, by removing trip hazards on the floor or disposing of unwanted chemicals.

It may not be possible to eliminate a hazard if doing so means that you cannot make the end product or deliver the service. If you cannot eliminate the hazard, then eliminate as many of the risks associated with the hazard as possible.

Level 2 control measures

If it is not reasonably practicable to eliminate the hazards and associated risks, you should minimise the risks using one or more of the following approaches:

- *Substitute the hazard with something safer*

For instance, replace solvent-based paints with water-based ones.

- *Isolate the hazard from people*

This involves physically separating the source of harm from people by distance or using barriers. For instance, install guard rails around exposed edges and holes in floors; use remote control systems to operate machinery; store chemicals in a fume cabinet.

- *Use engineering controls*

An engineering control is a control measure that is physical in nature, including a mechanical device or process. For instance, use mechanical devices such as trolleys or hoists to move heavy loads; place guards around moving parts of machinery; install residual current devices (electrical safety switches); set work rates on a production line to reduce fatigue.

Level 3 control measures

These control measures do not control the hazard at the source. They rely on human behaviour and supervision, and used on their own, tend to be least effective in minimising risks. Two approaches to reduce risk in this way are:

- *Use administrative controls*

Administrative controls are work methods or procedures that are designed to minimise exposure to a hazard. For instance, develop procedures on how to operate machinery safely, limit exposure time to a hazardous task, use signs to warn people of a hazard.

- *Use personal protective equipment (PPE)*

Examples of PPE include ear muffs, respirators, face masks, hard hats, gloves, aprons and protective eyewear. PPE limits exposure to the harmful effects of a hazard but only if workers wear and use the PPE correctly.

Administrative controls and PPE should only be used:

- when there are no other practical control measures available (as a last resort)
- as an interim measure until a more effective way of controlling the risk can be used
- to supplement higher level control measures (as a back-up).

Regulation 44-47: The Regulations include specific requirements if PPE is to be used at the workplace, including that the equipment is:

- selected to minimise risk to health and safety
- suitable for the nature of the work and any hazard associated with the work
- a suitable size and fit and reasonably comfortable for the person wearing it
- maintained, repaired or replaced so it continues to minimise the risk
- used or worn by the worker, so far as is reasonably practicable.

A worker must, so far as reasonably able, wear the PPE in accordance with any information, training or reasonable instruction.

4.2 How to develop and implement control options

Information about suitable controls for many common hazards and risks can be obtained from:

- codes of practice and guidance material
- manufacturers and suppliers of plant, substances and equipment used in your workplace
- industry associations and unions.

In some cases, published information will provide guidance on the whole work process. In other cases, the guidance may relate to individual items of plant or how to safely use specific substances. You may use the recommended control options if they suit your situation and eliminate or minimise the risk.

Developing specific control measures

You may need to develop specific control measures if the available information is not relevant to the hazards and risks or circumstances at your workplace. This can be done by referring to the chain of events that were recorded during the risk assessment.

For each of the events in the sequence, ask: "What can be done to stop or change the event occurring?" An example of this approach is shown in Appendix A.

Working through the events in the sequence will give you ideas about all possible ways to eliminate or minimise the risk. There may be more than one solution for each of the events. The control option you choose should be:

- one that provides the highest level of protection for people and is the most reliable – that is, controls located towards the top of the hierarchy in Figure 2.
- available – that is, it can be purchased, made to suit or be put in place.
- suitable for the circumstance in your workplace – that is, it will work properly given the workplace conditions, work process and your workers.

Where the hazard or risk has the potential to cause death, serious injury or illness, more emphasis should be given to those controls that eliminate or reduce the level of harm, than those that reduce the likelihood of harm occurring.

Make sure that your chosen solution does not introduce new hazards.

Cost of control measures

All risks can be controlled and it is always possible to do something, such as stopping the activity or providing instructions to those exposed to the risk. There will normally be a number of different options between these two extremes. Cost (in terms of time and effort as well as money) is just one factor to consider when determining the best control option.

The cost of controlling a risk may be taken into account in determining what is reasonably practicable, but cannot be used as a reason for doing nothing.

The greater the likelihood of a hazard occurring and/or the greater the harm that would result if the hazard or risk did occur, the less weight should be given to the cost of controlling the hazard or risk.

If two control measures provide the same levels of protection and are equally reliable, you can adopt the least expensive option.

Cost cannot be used as a reason for adopting controls that rely exclusively on changing people's behaviour or actions when there are more effective controls available that can change the risk through substitution, engineering or isolation.

Implementing controls

The control measures that you put into operation will usually require changes to the way work is carried out due to new or modified equipment or processes, new or different chemicals or new personal protective equipment. In these situations, it is usually necessary to support the control measures with:

- *Work procedures*

Develop a safe work procedure that describes the task, identifies the hazards and documents how the task is to be performed to minimise the risks.

- *Training, instruction and information*

Train your workers in the work procedure to ensure that they are able to perform the task safely. Training should require workers to demonstrate that they are competent in performing the task according to the procedure. It is insufficient to simply give a worker the procedure and ask them to acknowledge that they understand and are able to perform it. Training, instruction and information must be provided in a form that can be understood by all workers.

Information and instruction may also need to be provided to others who enter the workplace, such as customers or visitors.

- *Supervision*

The level of supervision required will depend on the level of risk and the experience of the workers involved. High levels of supervision are necessary where inexperienced workers are expected to follow new procedures or carry out difficult and critical tasks.

You may prepare a risk register that identifies the hazards, what action needs to be taken, who will be responsible for taking the action and by when. An example is provided at Appendix B.

4.3 How to ensure that controls remain effective

The following actions may help you monitor the control measures you have implemented and ensure that they remain effective:

- *Accountability for health and safety* – Accountability should be clearly allocated to ensure procedures are followed and maintained. Managers and supervisors should be provided with the authority and resources to implement and maintain control measures effectively.

- *Maintenance of plant and equipment* – This will involve regular inspection and testing, repair or replacement of damaged or worn plant and equipment. It includes checking that any control measures are suitable for the nature and duration of work, are set up and used correctly.
- *Up-to-date training and competency* – Control measures, particularly lower level controls, depend on all workers and supervisors having the appropriate competencies to do the job safely. Training should be provided to maintain competencies and to ensure new workers are capable of working safely.
- *Up-to-date hazard information* – Information about hazards, such as plant and substances, may be updated by manufacturers and suppliers and should be checked to make sure controls are still relevant. New technology may provide more effective solutions than were previously available. Changes to operating conditions or the way activities are carried out may also mean that control measures need to be updated.
- *Regular review and consultation* – Control measures are more effective where there is regular review of work procedures and consultation with your workers and their representatives.

OIR Disclosure Log

5. Step 4 – How to review controls

The control measures that you put in place should be reviewed regularly to make sure they work as planned. Don't wait until something goes wrong.

There are certain situations where you must review your control measures under the Regulations and, if necessary, revise them. A review is required:

- when the control measure is not effective in controlling the risk
- before a change at the workplace that is likely to give rise to a new or different health and safety risk that the control measure may not effectively control
- if a new hazard or risk is identified
- if the results of consultation indicate that a review is necessary
- if a health and safety representative requests a review.

You may use the same methods as in the initial hazard identification step to check controls. Consult your workers and their health and safety representatives and consider the following questions:

- Are the control measures working effectively in both their design and operation?
- Have the control measures introduced new problems?
- Have all hazards been identified?
- Have new work methods, new equipment or chemicals made the job safer?
- Are safety procedures being followed?
- Has instruction and training provided to workers on how to work safely been successful?
- Are workers actively involved in identifying hazards and possible control measures? Are they openly raising health and safety concerns and reporting problems promptly?
- Is the frequency and severity of health and safety incidents reducing over time?
- If new legislation or new information becomes available, does it indicate current controls may no longer be the most effective?

If problems are found, go back through the risk management steps, review your information and make further decisions about risk control. Priority for review should be based on the seriousness of the risk. Control measures for serious risks should be reviewed more frequently.

Quality assurance processes may be used if you design, manufacture or supply products used for work to check that the product effectively minimises health and safety risks. Obtain feedback from users of the product to determine whether any improvements can be made to make it safer.

Case studies demonstrating how to manage work health and safety risks in consultation with workers are at Appendix C.

6. Keeping records

Keeping records of the risk management process demonstrates potential compliance with the Act and Regulations. It also helps when undertaking subsequent risk assessments.

Keeping records of the risk management process has the following benefits. It:

- allows you to demonstrate how decisions about controlling risks were made
- assists in targeting training at key hazards
- provides a basis for preparing safe work procedures
- allows you to more easily review risks following any changes to legislation or business activities
- demonstrates to others (regulators, investors, shareholders, customers) that work health and safety risks are being managed.






The detail and extent of recording will depend on the size of your workplace and the potential for major work health and safety issues. It is useful to keep information on:

- the identified hazards, assessed risks and chosen control measures (including any hazard checklists, worksheets and assessment tools used in working through the risk management process)
- how and when the control measures were implemented, monitored and reviewed
- who you consulted with
- relevant training records
- any plans for changes.

There are specific record-keeping requirements in the Regulations for some hazards, such as hazardous chemicals. If such hazards have been identified at your workplace, you must keep the relevant records for the time specified.

You should ensure that everyone in your workplace is aware of record-keeping requirements, including which records are accessible and where they are kept.

Appendix A – Assessing how things go wrong

TIME	A customer comes into the service area with an issue about service	WHAT CAN STOP OR CHANGE THIS?	Service needs to be provided to customers who come into the service area. A telephone complaints service may remove some potential for customers to go to the service area.
	 WHAT MAY HAPPEN NEXT?		
	The customer service officer is unable to satisfy the customer's concerns or issues.	WHAT CAN STOP OR CHANGE THIS?	Providing customers with information about the extent of services and policies, and providing training to the customer service officer, may reduce the chance of dissatisfaction.
	 WHAT MAY HAPPEN NEXT?		
	During the service discussion with the customer service officer, the customer becomes upset.	WHAT CAN STOP OR CHANGE THIS?	Providing customer service officers with training on conflict resolution and dealing with difficult situations may prevent customers becoming upset. Ensuring other staff are available to assist.
	 WHAT MAY HAPPEN NEXT?		
	The customer service officer's unable to calm the customer and the customer becomes aggressive.	WHAT CAN STOP OR CHANGE THIS?	Implementing procedures for customer service officers to disengage with the customers safely is one way of managing the escalating situation.
	 WHAT MAY HAPPEN NEXT?		
	The situation escalates. There is no protection offered by the counter.	WHAT CAN STOP OR CHANGE THIS?	Change the service counter or area so that customer service officers are separated from customers or provide an escape route to a safe place.
	 WHAT MAY HAPPEN NEXT?		
The customer service officer is assaulted and suffers injury, shock and related problems.	WHAT CAN STOP OR CHANGE THIS?	Ensure that there are emergency procedures in place to stop assault. Ensure that there is first aid available to deal with the outcomes of an assault. Ensure that counselling is available to support the victim.	

Appendix C – Case studies

Case Study 1:

Two years ago, the Burbs Municipal Council implemented a number of written health and safety procedures used to train workers how to carry out particular tasks safely. As these procedures had not been reviewed since their implementation, the Safety Manager (SM) implemented a new approach to not only review these procedures but also promote health and safety more widely across the organisation by encouraging staff involvement and co-operation.

To do this, the SM established and facilitated safety workshops each Friday for an hour where a team would review a particular task and its procedures to identify hazards, assess risks and options to control these. The team included management, council workers, the respective health and safety representative and any contractors engaged to carry out the work.

The SM's approach was to facilitate the workshops but then hand this role over to the relevant team supervisor, who would then facilitate future meetings to review other tasks conducted by the workers. The written health and safety procedures were not used in the workshops as the SM wanted to learn more about the hazards, risks and controls from the workers without prompting. However, any changes discussed and agreed during the meeting would be included in the revised written safety procedures.

The first safety workshop was conducted in the Parks and Gardens Branch and involved management, workers, their health and safety representatives and a representative from the maintenance shop that supplied the Parks and Gardens Branch with a variety of vehicles and equipment.

Safety workshop – 20 August 2010	
Team	Parks and Gardens Branch
Task being reviewed	Cleaning of the toilets in the council's parks
Description of task	Undertaken by two workers each Monday morning in a Council truck who would clean the eight toilet blocks across the municipality
What does the task involve?	<p>At the depot:</p> <ul style="list-style-type: none"> • Load the truck with the compressor and pressure hose along with cleaning chemicals and materials <p>At the park:</p> <ul style="list-style-type: none"> • Open toilet block • Clean toilets • Unload compressor and pressure hose, place them in toilet block and attach to tap, turn on compressor and hose walls and floors • Put compressor and pressure hose along with cleaning gear back on truck • Dry out toilet block floor by sweeping • Leave park and go to next one

In order to gather advice and information from the team, the SM asked the following questions and shared the responses by writing them on a whiteboard or butchers paper:

	<i>What hazards are encountered when doing the task?</i>	<i>What risks do these pose to the health and safety?</i>	<i>How are these hazards and risks controlled?</i>
Plant	<ul style="list-style-type: none"> • Truck • Compressor and pressure hose 	<ul style="list-style-type: none"> • Truck - faulty truck could cause accident and cause injuries to workers and others • Compressor and pressure hose - faulty fuel line in compressor could cause burns and injuries through fire or explosion 	<ul style="list-style-type: none"> • Truck and compressor have maintenance schedule • Checklist for visual inspection for all plant before it leaves depot • Reporting and tagging system for all defective plant
Manual Handling	<ul style="list-style-type: none"> • Loading and unloading the compressor • Carrying the compressor to and from the toilet block 	<ul style="list-style-type: none"> • Heavy load can cause sprains, strains, back injuries or fractures and cuts if dropped on foot 	<ul style="list-style-type: none"> • Compressor has handles fitted to assist in lifting and carrying • Two persons required to lift and carry compressor • Only workers who have been trained able to lift and carry compressor
Chemical	<ul style="list-style-type: none"> • Cleaning agents used to clean toilets and basins 	<ul style="list-style-type: none"> • Skin irritation, rashes and illness caused by exposure to chemicals and their vapours in confined space 	<ul style="list-style-type: none"> • Only non-toxic cleaning agents used • Gloves provided to avoid skin contact
Noise	<ul style="list-style-type: none"> • Operating the compressor in a closed space with hard surfaces 	<ul style="list-style-type: none"> • Hearing loss from prolonged exposure to the noise levels generated by the compressor 	<ul style="list-style-type: none"> • Hearing protection provided for wearing when hosing out the toilet block
Slips, trips and falls	<ul style="list-style-type: none"> • Wet floor when hosing out the toilet block. 	<ul style="list-style-type: none"> • Cuts and bruises caused by slipping on wet surface 	<ul style="list-style-type: none"> • Safety boots were provided that had slip-resistant soles

Many staff present at the workshop indicated it was a waste of time as everything discussed was covered by the health and safety procedure, which they knew backwards. The SM acknowledged this concern but then asked the team whether the way the task was being conducted could be changed to improve health and safety.

One staff member raised concerns about lugging the compressor around 16 times every Monday morning and that doing this tempted them to call in sick. The SM was curious about this and asked why it was necessary to take the compressor off the truck and place it in the toilet. The

workers explained that the length of the hose on the pressure spray was short and could only be operated with the compressor in the toilet block.

After hearing this, the representative from the maintenance shop who supplied the compressor mentioned that he could attach a 10-metre hose to the compressor, which would mean the compressor would not have to be taken off the truck. The team agreed this was a good idea and would eliminate the manual handling risks associated with lifting and carrying the compressor. The SM asked what other impacts this would have. The team agreed this would also reduce the noise as the compressor would now be outside the toilet block, but that there could be new risks associated with handling and storing a 10 metre long hose. The team agreed to trial the new hose. It was then installed with a hose handling system.

Following the workshop, the SM asked the supervisor to ensure the modifications were made within two weeks and to revise the procedures and have them checked by the health and safety representative and workers.

Case Study 2:

Jane Smith has been working at the local grocery store for the last 12 months. She had recently taken on a new role as the bakery supervisor and was eager to review the work activities and safety procedures. In preparing for the review, Jane considered how she would conduct the review and who she should speak with.

As a first step, Jane identified the different activities and tasks that were carried out by the workers. These included:

- preparing a number of different products such as bread, cakes, slices and doughnuts
- cleaning items used in product preparation
- general housekeeping.

The next step was to analyse what was involved with each activity. Jane spent three mornings that week with the four bakers who worked in the bakery department. She talked to them about the work activities and what they thought could be changed to improve the safety of the workplace. One of the bakers had been working in the store for over 10 years, whilst another had been working for over 25 years. The other two bakers were apprentices and had only been working with the store for around six months.

From these discussions, Jane identified a number of key tasks the bakers carried out every day when preparing the baked products:

- moving the ingredients from their storage locations to the area of use
- mixing the ingredients together using specialised mixers
- transferring the mixture to the container for baking
- putting them in the oven and removing them from the oven
- slicing and decorating
- packaging the products.

During an inspection of the bakery, Jane and the bakers identified a number of hazards, including the following:

- the doughnut mixer was not guarded and the mixing bowl could be accessed when the machine was operating
- the concrete floors were slippery in the mixing room and flour was spilt where the bakers walked
- low lighting in the food preparation area

- there was narrow access and restricted movement in the storage area where the flour bags were kept.

Jane and the bakers discussed the risks associated with each of the hazards and what could be done to control these risks. In relation to the unguarded mixer, one of the bakers suggested purchasing or hiring a new model with an interlocking guard. After considering the ideas of the bakers, Jane completed the following risk register:

XYZ Grocery Store Pty Ltd Work area: Bakery department Form completed by: Jane Smith (Bakery supervisor) Date form completed: 05/11/2010			
Hazard identification <i>Hazard:</i> Doughnut mixer not guarded and mixing bowl can be accessed when machine is operating.			
Risk Assessment <i>What is the harm the hazard could cause:</i> The person operating the mixer could be injured by the moving parts if their hand slipped in while the machine was operating. Hand could be cut or could even lose a finger. <i>What is the likelihood of this happening:</i> This machine is used several times a day. Two of the workers have not been working in the bakery for a long time and are not very experienced in using the equipment. <i>Persons at risk:</i> All four bakers who operate the machine. <i>Existing control measure:</i> Staff follow policy and operating instructions to use the mixer safely – not very effective because it relies on staff keeping hands away from the dangerous parts. <i>Consequence:</i> Serious injuries <i>Likelihood:</i> Very likely <i>Outcome:</i> High risk - the mixer must not be used again until the risk has been controlled.			
Control measures <i>Possible control options:</i> <ul style="list-style-type: none"> • <i>Elimination</i> – Eliminating the use of the mixer completely will mean the business cannot continue to sell baked products as the dough cannot be mixed. Business revenue will suffer. • <i>Substitution</i> – Use of the mixer could be substituted by hand mixing the dough. One day's production will be lost in the change over. This method can only be considered an interim option as it is not sustainable for more than a day or two with present staff. However, part time staff could be hired to mix the dough. Business income would be reduced and impact on revenue. Alternatively, the mixer could be replaced by purchasing a new, safer machine with a built-in guard. • <i>Engineering</i> – The mixer could be modified by adding an interlocking guard. A mixer could be hired for the period the old mixer is in for repairs. One day's production will be lost in this option. The modifications are estimated to cost \$1600. Other costs included are: one day lost in production plus hire of substitute machine for approximately 10 days and transport. Estimated cost is less than \$6000. • <i>Administrative or PPE</i> – All staff told to keep hands away from the mixing bowl while it is in use. Only the more experienced bakers are to operate the mixer. <i>Preferred control option:</i> Purchase a new mixer, which would not cost much more than having the old one modified. Mixing to be done by hand while waiting for replacement mixer to arrive. The costs involved are outweighed by worker safety and this option eliminates the risk of injury.			
Implementation			
Associated activities	Resources required	Person(s) responsible	Sign off and date
New mixer to be purchased. Mixing to be done by hand while waiting for new mixer. May require staff working more hours	Less than \$6000	Jane Smith – Bakery supervisor	J Smith 9/11/10
Develop new work procedures Provide training to bakers on using the new machine	3 hours	Jane Smith – Bakery supervisor	J Smith 20/12/10

Review Scheduled review date: 31 January 2011
Are the control measures in place? <ul style="list-style-type: none"> • Yes – the new machine has an interlocking guard and bakers have been provided with training on how to use the machine in accordance with the manufacturer's instructions.
Are the controls eliminating or minimising the risk? <ul style="list-style-type: none"> • Yes – the interlocking guard prevents people from putting their hand in the mixing bowl.
Are there any new problems with the risk? <ul style="list-style-type: none"> • No.

Jane repeated these steps for each hazard that she identified. The review of the work activities and the implemented control measures improved the safety in the bakery department at the grocery store.

OIR Disclosure Log

Managing risks of plant in the workplace

Code of practice 2013

OIR Disclosure Log



This Queensland code of practice has been approved by the Attorney-General and Minister for Justice and commences on 1 December 2013.

This code is based on a national model code of practice developed by Safe Work Australia and approved by the Select Council on Workplace Relations on 13 July 2012 as part of the harmonisation of work health and safety laws.

OIR Disclosure Log

PN11579



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Foreword

This code of practice on managing health and safety risks of plant in the workplace is an approved code of practice under section 274 of the *Work Health and Safety Act 2011* (the Act).

An approved code of practice is a practical guide to achieving the standards of health, safety and welfare required under the Act and the Work Health and Safety Regulation 2011 (the Regulation).

A code of practice applies to anyone who has a duty of care in the circumstances described in the code. In most cases, following an approved code of practice would achieve compliance with the health and safety duties in the Act, in relation to the subject matter of the code. Like regulations, codes of practice deal with particular issues and do not cover all hazards or risks that may arise. The health and safety duties require duty holders to consider all risks associated with work, not only those for which regulations and codes of practice exist.

Codes of practice are admissible in court proceedings under the Act and Regulation. Courts may regard a code of practice as evidence of what is known about a hazard, risk or control and may rely on the code in determining what is reasonably practicable in the circumstances to which the code relates.

Compliance with the Act and Regulation may be achieved by following another method, such as a technical or an industry standard, if it provides an equivalent or higher standard of work health and safety than the code.

An inspector may refer to an approved code of practice when issuing an improvement or prohibition notice.

This code of practice has been developed by Safe Work Australia as a model code of practice under the Council of Australian Governments' *Inter-Governmental Agreement for Regulatory and Operational Reform in Occupational Health and Safety* for adoption by the Commonwealth, state and territory governments.

Scope and application

This code provides practical guidance on how to manage health and safety risks of plant once it is in the workplace, from plant installation, commissioning and use through to decommissioning and dismantling.

This code provides practical guidance to persons who conduct a business or undertaking and have management or control of plant in the workplace, as well as to persons who install and commission plant. It includes information about specific control measures required under the Regulation for plant generally. Other approved codes of practice on various types of plant may also be referenced.

The Code of practice: *Safe design, manufacture, import and supply of plant* provides further guidance for persons conducting a business or undertaking involved in these activities.

How to use this code of practice

In providing guidance, the word 'should' is used in this code to indicate a recommended course of action, while 'may' is used to indicate an optional course of action.

This code also includes various references to provisions of the Act and Regulation which set out the legal requirements. These references are not exhaustive. The words 'must', 'requires' or 'mandatory' indicate that a legal requirement exists and must be complied with.

1 Introduction

Plant is a major cause of workplace death and injury in Australian workplaces. There are significant risks associated with using plant and severe injuries can result from the unsafe use of plant including:

- limbs amputated by unguarded moving parts of machines
- being crushed by mobile plant
- sustaining fractures from falls while accessing, operating or maintaining plant
- electric shock from plant that is not adequately protected or isolated
- burns or scalds due to contact with hot surfaces, or exposure to flames or hot fluids.

Other risks include hearing loss due to noisy plant and musculoskeletal disorders caused by manually handling or operating plant that is poorly designed.

1.1 The meaning of key terms

Plant includes any machinery, equipment, appliance, container, implement and tool, and includes any component or anything fitted or connected to any of those things. Plant includes items as diverse as lifts, cranes, computers, machinery, conveyors, forklifts, vehicles, power tools and amusement devices.

Plant that relies exclusively on manual power for its operation and is designed to be primarily supported by hand (e.g. a screw driver) is not covered by the Regulation. The general duty of care under the Act applies to this type of plant.

Certain kinds of plant, such as forklifts, cranes and some pressure equipment, require a licence from the regulator to operate and some high-risk plant must also be registered with the regulator.

Competent person means a person who has acquired through training, qualification or experience the knowledge and skills to carry out the task.

A competent person has a more specific meaning in the following circumstances:

- For design verification, the person must have the skills, qualifications, competence and experience to design the plant or verify the design.
- For inspection of plant for registration purposes the person must have
 - educational or vocational qualifications in an engineering discipline relevant to the plant being inspected
 - knowledge of the technical standards relevant to the plant being inspected.
- For inspection of mobile cranes, tower cranes and amusement devices the person must:
 - have the skills, qualifications, competence and experience to inspect the plant, and be registered under a law that provides for the registration of professional engineers (in jurisdictions where such a law exists)
 - be determined by the WHS regulator to be a competent person.

Fail safe means a state or condition where, if any component or function of the plant fails, a system exists to prevent any increase in the risks. For example, if the primary hoist brake fails on a crane lifting a person in a workbox, the secondary hoist brake will prevent uncontrolled dropping of the workbox. However, once the secondary brake is engaged, a lower level of safety has been reached. The situation must be made safe and the fault rectified so that the fail safe capability is re-established.

1.2 Who has health and safety duties in relation to plant at the workplace?

A person conducting a business or undertaking has the primary duty under the Act to ensure, so far as is reasonably practicable, that workers and other persons are not exposed to

health and safety risks arising from the business or undertaking. This duty includes ensuring, so far as is reasonably practicable:

- the provision and maintenance of safe plant
- the safe use, handling, storage and transport of plant.

Persons who conduct a business or undertaking involving the management or control of fixtures, fittings or plant at a workplace also have a duty to ensure, so far as is reasonably practicable, that the fixtures, fittings and plant are without risks to the health and safety of any person.

The Regulation include specific duties for persons who conduct a business or undertaking involving the management or control of plant (persons with management or control of plant) including requirements to:

- manage the health and safety risks associated with plant
- prevent unauthorised alterations to or interference with plant
- use plant only for the purpose for which it was designed unless the proposed use does not increase the risk to health or safety.

As there are generally a number of people involved with plant during its lifecycle (e.g. from its design through to its use and eventual disposal), a person can have more than one duty and more than one person can have the same duty at the same time.

For example, if you own and operate plant in your workplace and you decide to modify it yourself, you will have the duties of a designer and manufacturer as well as a person with management or control of plant at the workplace.

If you own the plant, you will be the person with management or control of that plant. If you hire or lease an item of plant, you have management or control of that plant for the period that you have hired it for and will have responsibility for ensuring health and safety together with the person you have hired or leased it from.

If you conduct a business or undertaking that installs, commissions, maintains, operates, tests, repairs or carries out any other activity associated with plant in workplaces, even if you do not own the plant, you will be a person with management or control of the plant. This is because you have a degree of control over the plant during the period of the activity. In these situations you will have responsibility for managing risks associated with the plant together with other duty holders, such as the owner of the plant.

Officers, for example company directors, have a duty to exercise due diligence to ensure that the business or undertaking complies with the Act and Regulation. This includes taking reasonable steps to ensure that the business or undertaking has and uses appropriate resources and processes to eliminate or minimise risks that arise from plant used in the workplace.

Workers have a duty to take reasonable care for their own health and safety and must not adversely affect the health and safety of other persons. Workers must comply with any reasonable instruction and cooperate with any reasonable policy or procedure relating to health and safety at the workplace.

1.3 Other persons with duties related to plant

Designers, manufacturers, suppliers, importers and installers of plant must also ensure, so far as is reasonably practicable, that the plant is without risks to health and safety.

Designers

The safe design of plant plays a critical role in eliminating hazards and risks before plant is introduced in the workplace.

A designer is a person who conducts a business or undertaking that designs, redesigns or alters the design of plant or any part of the plant that is to be used or could reasonably be expected to be used at a workplace.

Designers have a duty to ensure, so far as is reasonably practicable, that the plant is without risks to health and safety to workers throughout the life of the plant. Among other things, designers must also provide specific information to the manufacturer. If the manufacturer advises the designer that there are safety issues with the design, the designer must revise the information to take account of these concerns, or tell the manufacturer in writing the reasons why such revision is not necessary. Designers must also carry out, or arrange the carrying out of, any calculations, analysis, testing or examination that may be necessary to ensure the plant is safe and without risks to health and safety.

Manufacturers

Manufacturers have a duty to ensure, so far as is reasonably practicable, that the plant is manufactured to be without risks to workers throughout the lifecycle of the plant. Manufacturers must advise the designer of any hazards they identify during manufacture and ensure that hazards are not incorporated into the manufacture of the plant.

Manufacturers must also arrange for any calculations, analysis, testing or examination that may be necessary to ensure that the plant is without risks to health and safety. If design registration is required, the manufacturer must give the design registration number to the person with management or control of the plant, who must ensure the number is kept readily accessible.

A reliable way to achieve this is for the manufacturer to permanently mark the design registration number on the plant.

Importers and suppliers

Importers of plant from outside Australia must take all reasonable steps to obtain information from the manufacturer and then pass this information on when supplying the plant. If this is not available importers must carry out, or arrange the carrying out of, any calculations, analysis, testing or examination that may be necessary to ensure, so far as is reasonably practicable, that the plant is without risks to the health and safety of any person. If design registration is required, the importer will also have duties to ensure that the design of plant is registered.

Any imported plant must be inspected, having regard to information provided by the manufacturer. If this information requires the plant to be tested then the importer must undertake this testing.

If an importer identifies any hazards, the importer must not supply the plant until the risks have been eliminated, or minimised, so far as is reasonably practicable, or if that is not possible, advise the person receiving the plant of those risks.

If the item of plant requires any alteration as a result of testing or hazard identification, then the importer must take all reasonable steps to advise the designer and manufacturer of this.

Suppliers of second-hand plant must ensure, so far as is reasonably practicable, that any faults in the plant are identified. A written notice outlining the condition of the plant, any faults identified and, if appropriate, that the plant should not be used until the fault is rectified must be provided to the person to whom the plant is supplied.

If second-hand plant is to be used for scrap or spare parts, the supplier must inform the person they are supplying the second-hand plant to that the plant is being supplied as scrap or spare parts and that the plant in its current form is not to be used as plant. This must be done in writing or by marking the item of plant.

Further information is available in the *Safe design, manufacture, import and supply of plant code of practice*.

Installers

An installer is a person who conducts a business or undertaking who sets up, assembles, places in position and connects or otherwise makes plant ready for use. Installers have certain duties under the Regulation (see section 3.2 of this code).

1.4 What is required to manage the risks associated with plant?

Regulation section 203: A person with management or control of plant at a workplace must manage risks to health and safety associated with the plant.

Regulation sections 34-38: In order to manage risk under the Regulation, a duty holder must:

- identify reasonably foreseeable hazards that could give rise to the risk
- eliminate the risk so far as is reasonably practicable
- if it is not reasonably practicable to eliminate the risk, minimise the risk so far as is reasonably practicable by implementing control measures in accordance with the hierarchy of control
- maintain the implemented control measure so that it remains effective
- review, and if necessary revise, risk control measures so as to maintain, so far as is reasonably practicable, a work environment that is without risks to health and safety.

This code provides guidance on how to manage the risks associated with plant in the workplace by following a systematic process that involves:

- identifying hazards
- if necessary, assessing the risks associated with these hazards
- implementing and maintaining risk control measures
- reviewing risk control measures.

Guidance on the general risk management process is available in the *How to manage work health and safety risks code of practice*.

Providing and obtaining information

Designers, manufacturers, importers and suppliers all have duties to provide information about the plant to enable other duty holders to fulfil the responsibilities they have in managing the risks associated with it. This information must be given to each person to whom the plant (or its design) is provided. Information must be passed on from the designer through to the manufacturer and supplier to the end user. This information includes:

- the purpose for which plant was designed or manufactured
- the results of any calculations, analysis, testing or examination
- any conditions necessary for the safe use of the plant.

Consulting workers

Consultation involves sharing of information, giving workers a reasonable opportunity to express views and taking those views into account before making decisions on health and safety matters.

The Act section 47: The Act requires that you consult, so far as is reasonably practicable, with workers who carry out work for you who are (or are likely to be) directly affected by a work health and safety matter.

The Act section 48: If the workers are represented by a health and safety representative, the consultation must involve that representative.

Consultation with workers and their health and safety representatives is required at each step of the risk management process.

Your workers usually know the hazards and risk associated with the plant they use. By drawing on the experience, knowledge and ideas of your workers you are more likely to identify all hazards and develop effective risk controls.

It is important to consult your workers as early as possible when planning to introduce new plant or change the way plant is used.

Consulting, co-operating and co-ordinating activities with other duty holders

There may be other businesses involved with plant at your workplace (e.g. who carry out installation or repair, or who share the workplace with you).

The Act section 46: The Act requires that you consult, co-operate and co-ordinate activities with all other persons who have a work health or safety duty in relation to the same matter, so far as is reasonably practicable.

For example, if you own or manage an on-hire business and your workers undertake work at other workplaces then you should exchange information with the host business to determine:

- if your workers could be exposed to hazardous plant
- what each of you will do to control any associated risks.

If you use plant (e.g. mobile plant such as a forklift) at a workplace that is shared with other businesses you should talk to those businesses about the risks your plant could cause them and work together in a co-operative and co-ordinated way to manage the risks.

Further guidance on consultation requirements is available in the *Work health and safety consultation, co-operation and co-ordination code of practice*.

1.5 Registering plant

Certain items of plant and types of plant designs must be registered. A list of registrable plant is provided at Appendix A.

Registrable plant must be:

- design registered before it is supplied
- item registered before it is used.

Design registration

Design registration is the registering of a completed design, from which any number of individual items can be manufactured. The person applying for design registration may be either the original designer or a person with management or control of the item of plant.

Item registration

Plant item registration applies to a specific item of plant and each item requires registration. The purpose of registering an item of plant is to ensure that it is inspected by a competent person and is safe to operate. It is the responsibility of the person with management or control of plant to ensure that all registrable plant items are registered.

Further information on registering plant is provided in Chapter 5 of this code.

2 The risk management process

2.1 Identifying hazards

Identifying hazards involves finding all of the things and situations that could potentially cause harm to people. Hazards associated with plant generally arise from:

- the plant itself, for example hazards associated with a forklift would include hazards relating to its mobility, its electrical, hydraulic and mechanical power sources, moving parts, load-carrying capacity and operator protection
- how and where the plant is used. The forklift, for example may have hazards arising from the kind of loads it is used to lift, the size of the area in which it is used and the slope or evenness of the ground.

Inspect the plant

Inspect each item of plant in your workplace and observe how it is used. Talk to your workers and their health and safety representatives to find out what their experience is with the plant they operate, inspect or maintain.

If you have hired or leased plant, you should also consult the person who owns the plant about potential hazards, because you both have responsibility for ensuring that the plant is safe and without risk to health and safety.

When identifying hazards you should think about all the activities that may be carried out during the life of the plant at your workplace, such as: installation, commissioning, operation, inspection, maintenance, repair, transport, storage and dismantling. For each of these activities, you should consider whether the plant could:

- cause injury due to entanglement, falling, crushing, trapping, cutting, puncturing, shearing, abrasion or tearing
- create hazardous conditions due to harmful emissions, fluids or gas under pressure, electricity, noise, radiation, friction, vibration, fire, explosion, moisture, dust, ice, hot or cold parts
- cause injury due to poor ergonomic design, for example if operator controls are difficult to reach or require high force to operate.

Other factors to consider include:

- the **condition** of the plant, for example its age, its maintenance history and how frequently the plant is used.
- the **suitability** of the plant, for example is it actually being used for its intended purpose?
- the **location** of the plant, for example what is its impact on the design and layout of the workplace and are workers able to access the plant without risk of slips, trips or falls?
- **abnormal situations**, for example, what abnormal situations, misuse or fluctuation in operating conditions can you foresee?

A checklist to assist in identifying hazards associated with plant is at Appendix B.

Review safety information

Information about hazards, risks and control measures relating to plant in your workplace can be obtained from:

- manufacturers, importers or suppliers of the plant
- maintenance technicians or specialists such as engineers
- your workers
- WHS regulators, unions and other organisations
- businesses or undertakings similar to your own
- technical standards.

Review incident records and data

Check your records of workplace injuries and illness, dangerous incidents, plant inspection reports and maintenance logs, workers' compensation records and the results of any investigations to collect information about plant hazards.

2.2 Assessing the risks

A risk assessment involves considering what could happen if someone is exposed to a hazard combined with the likelihood of it happening. A risk assessment can help you determine:

- how severe a risk is
- whether existing control measures are effective
- what action you should take to control the risk
- how urgently the action needs to be taken.

A risk assessment is unnecessary if you already know the risk and how to control it.

To assess the risk associated with plant hazards you have identified, you should consider:

What is the potential impact of the hazard?

- How severe could an injury or illness be? For example, lacerations, amputation, serious or fatal crushing injury, burns or loss of hearing.
- What is the worst possible harm the plant hazard could cause?

How likely is the hazard to cause harm?

- Is it highly likely or unlikely to happen?
- How frequently are workers exposed to the hazard? For example, if plant is used constantly with five operators per shift and three 8-hour shifts and there is a lack of high level control measures, the risk will increase compared to the occasional use by a single operator.

Other factors to consider when undertaking a risk assessment include:

- In what type of conditions is the plant used in (e.g. in a confined space, muddy or dusty environment)?
- What is the condition of the plant? For example, is it old and missing safety features found on new plant? Is it reliable or often needing emergency maintenance?
- If there are other people or items of plant in the vicinity, what effect do they have on the likelihood or consequence?
- Where and when is access required during the installation, operation or maintenance of plant and in an emergency?
- What work practices and procedures exist in relation to plant safety (for example, isolation to carry out maintenance, emergency shut-down)?
- What kind of training, information, instruction and supervision is provided to workers and other persons who may be exposed to plant?
- Does the plant's safety depend on the competency of its operators?
- How is work organised? For example:
 - the speed of the process line
 - pedestrian and vehicular traffic around the plant
 - time spent on repetitive tasks
 - shift work arrangements
 - any production incentives that may affect health and safety.

2.3 Controlling risks

The ways of controlling risks associated with plant are ranked from the highest level of protection and reliability to the lowest. This ranking is known as the *hierarchy of risk control*. The Regulation require duty holders to work through this hierarchy to choose the control that most effectively eliminates or, where that is not reasonably practicable, minimises the risk in the circumstances. Specific controls are required under the Regulation for certain types of plant, such as:

- powered mobile plant
- plant that lifts or suspends loads
- industrial robots
- lasers
- pressure equipment
- scaffolds.

The hierarchy of control measures

Elimination – The most effective control measure is to remove the hazard or hazardous work practice associated with the plant (e.g. buy pre-sawn timber instead of using a power saw).

Many hazards can be addressed before introducing plant into your workplace, that is, in the planning and purchasing stages. For example, purchasing machinery that is designed and built to produce low noise levels is more effective than providing workers with personal hearing protectors. This also avoids costly modifications to plant after it is purchased.

If elimination is not reasonably practicable, you must minimise the risk by:

Substitution – Substitute the plant (or hazardous parts of it) with plant that is safer. For example:

- using a cordless drill instead of an electric drill if the power cord is in danger of being cut
- isolation – separate the hazardous plant from people, either by distance or physical barrier.
For example:
 - constructing a booth from which the plant can be operated remotely
 - using concrete barriers to separate mobile plant from workers.

Engineering controls – Include modifications to tools or equipment (e.g. installing guards to prevent contact with moving parts of machinery or installing a roll over protective structure on a tractor).

Administrative controls – If risk remains, it must be minimised by implementing administrative controls, so far as is reasonably practicable, for example installing a tag-out system to ensure that workers are aware that the plant is isolated from its power source and must not be operated while maintenance or cleaning work is being done. Providing training and supervision, using warning signs or arranging work to minimise the time spent near noisy machinery are all examples of administrative controls.

Personal protective equipment (PPE) – Any remaining risk must be minimised with suitable PPE, such as providing workers with breathing protection, hard hats, gloves, aprons and protective eyewear.

Administrative control measures and PPE rely on human behaviour and supervision, and used on their own, tend to be least effective in minimising risks.

Combining control measures

In many cases, a combination of control measures will provide the best solution. For example, protecting workers from flying debris when using a concrete cutting saw may involve guarding the blade, isolating the work area and using PPE such as a face shield.

2.4 Maintaining and reviewing risk control measures

Regulation section 37: Control measures must be maintained so that they continue to protect workers and other people from the hazards associated with plant. The control measures must be:

- fit for purpose
- suitable for the nature and duration of the work
- installed, set up and used correctly.

Regulation section 38: A person conducting a business or undertaking must review and as necessary revise control measures:

- when the control measure is not effective in controlling the risk
- before a change at the workplace that is likely to give rise to a new or different health and safety risk that the control measure may not effectively control
- if a new hazard or risk is identified
- if the results of consultation indicate that a review is necessary
- if a health and safety representative requests a review.

The control measures that are implemented must be reviewed and, if necessary, revised to make sure they work as planned and that no new hazards have been introduced by the control measures.

You should consult your workers to obtain feedback on the plant and work processes being used and consider the following questions:

- Are the relevant workers aware of the control measures and do they understand them?
- Are the control measures, for example guards, working effectively in both their design and operation?
- Have all hazards associated with the plant been identified?
- Has the purchase of a new item of plant made the job safer?
- Are safety procedures being followed?
- Has an incident occurred in relation to the plant?
- If new legislation or new information becomes available, does it indicate current controls may no longer be the most effective?

When deciding how frequently to carry out a review, you should consider the level of risk (high risk plant may need more frequent review) and the type of plant involved (there may be particular stages in the life of the plant where a more frequent review is needed).

3 Controlling risks: From purchase to disposal

3.1 Purchasing and hiring plant

Many injuries and illnesses associated with plant occur due to a failure to select the right equipment for the job. Before you purchase plant, check that it is suitable for the intended use including the environment it will be used in and the workers using it. Discuss your needs with the plant supplier, who must provide you with information about:

- the purpose for which the plant was designed or manufactured
- the results of any calculations, analysis, testing or examination
- any conditions necessary for the safe use of the plant
- any alterations or modifications made to the plant.

Before purchasing, hiring or leasing plant you should also determine:

- the hazards and risks associated with installation, commissioning, operation, inspection, maintenance, repair, transport, storage and dismantling of the plant
- control measures needed to minimise these hazards and risks
- the manufacturer's recommendations in relation to the frequency and type of inspection and maintenance needed
- any special skills required for people who operate the plant or carry out inspection and maintenance
- any special conditions or equipment required to protect the health and safety of people carrying out activities such as installation, operation and maintenance
- any alterations or modifications to be made to the plant.

You should check whether the plant includes some or all of the following characteristics:

- contact with or access to dangerous parts is prevented, for example by using guards and protective structures
- it is of sturdy construction and has tamper-proof design
- there are no obstructions to the plant operator
- it has fail safe operation
- it is easy to inspect and maintain
- it does not introduce other hazards (for example manual handling problems or excessive noise) into your workplace
- it incorporates measures to minimise risks during use (for example low noise).

Purchasing second-hand plant

Regulation section 198: A supplier of plant must:

- take all reasonable steps to obtain the information required to be provided to the manufacturer under section 23(4)(a) and (c) of the Act and these Regulations
- when the plant is supplied, ensure the person to whom the plant is supplied is given the information obtained by the supplier.

Regulation section 199: A supplier of second-hand plant must ensure, so far as is reasonably practicable, that any faults in the plant are identified.

Before plant is supplied, the supplier of second-hand plant must ensure that the person to whom the plant is supplied is given written notice of:

- the conditions of the plant
- any faults identified
- if appropriate, that the plant should not be used until the faults are rectified.

Regulation 8: A supply of a thing does not include the supply of a thing by a person who does not control the supply and has no authority to make decisions about the supply, for example an auctioneer without possession of the thing or a real estate agent acting in their capacity as a real estate agent.

Suppliers' duties apply whether the plant is new, second-hand or hired out.

Some examples of suppliers include a person conducting a business or undertaking who:

- sells second-hand plant at a retail outlet or directly sells their own second-hand plant
- imports second hand plant for on sale
- auctions second-hand plant, excepting certain clearing sales (see below).

Suppliers' duties apply to suppliers that know, or should know, the plant is to be used in a workplace.

Suppliers' duties apply to a person conducting a business or undertaking whether the sale is a one-off sale or forms part of the business' day-to-day operations.

Duty to supply safe plant

Suppliers of second-hand plant must ensure, so far as is reasonably practicable, that the plant it without risks to the health and safety of persons who use it or may be exposed to it.

This includes, so far as is reasonably practicable, identifying any faults in the plant.

Suppliers of second hand plant, other than scrap or spare parts, must give written notice to a prospective buyer of:

- the condition of the plant, including identified faults, if any
- if appropriate, that the plant should not be used until the faults are rectified.

Suppliers of second-hand plant must also take all reasonable steps to obtain information about how to use the plant correctly and safely from the manufacturer or original supplier.

Suppliers of second-hand plant must give the buyer:

- this information
- all available records of the plant that were kept by the previous owner.

The information may include data sheets, test certificates, operations and service manuals, reports and a safety manual.

Out dated or non-existent safety features of second-hand plant

Second-hand plant is more likely to have out-dated or missing safety features.

In these circumstances suppliers of second-hand plant must do what is reasonably practicable to supply equipment that is safe for use at work.

The degree of risk posed by the plant must be weighed up against the cost of implementing measures to minimise it. Suppliers of second-hand plant should consider:

- if it is reasonably practicable to retrofit or modify the plant to improve its safety having regard to improvements to that type of plant since its manufacture
- if not reasonably practicable—whether information needs to be given to the buyer about any relevant matters including the purpose for which the plant was designed or manufactured and any conditions necessary to ensure the plant is without risks to health and safety when properly used.

Buyers also have a duty to ensure the plant is safe and has all the required safety features before bringing it into service.

Adequate information to be provided about the condition of second-hand plant

Adequate information must be given to the buyer about the purpose for which the plant was designed or manufactured and any conditions necessary to ensure its safe use.

Apart from the manufacturer or original supplier—information about using second-hand plant safely, including its condition, may be obtained from:

- the previous owner of the plant
- a 'competent person' engaged to assess the plant and develop this information.

Without this kind of information, suppliers of second-hand plant have no way of knowing whether they have met their suppliers' duties under the Act.

Suppliers' duties and agents or auctioneers selling used agricultural plant at clearing sales

Suppliers' duties apply to sellers' agents like auctioneers, unless the agent does not take control of the supply and has no authority to make decisions about the supply.

Agents selling used agricultural plant at clearing sales do not take possession of the plant, have little or no control of the supply and are not considered to be suppliers.

In these limited circumstances the suppliers' duties will only apply to the seller—not their agent.

Supplying scrap and spare parts

Plant sold for scrap or spare parts are not intended to be used at a workplace so does not need to be made safe or supplied with instructions for use.

However the supplier must tell prospective buyers that the plant is being supplied for scrap or spare parts only and that it cannot be used safely in its current form for any other purpose.

This should be done in writing or by marking the item of plant.

Hiring plant

When you hire plant, both you and the person you have hired it from must ensure, so far as is reasonably practicable, that the plant is safe to use. During the time that the plant is in your possession you will have control over the way the plant is used in the workplace.

Before you hire the plant you should assess whether the plant is suitable for its intended use. You should also check that the plant has been inspected and maintained by the supplier according to the manufacturer's specifications. This may involve checking the log book or maintenance manual. You should also ensure that the supplier provides you with the manufacturer's information about the purpose of the plant and its proper use.

Any person who hires or leases plant to others will have duties as a supplier of plant and as a person with management or control of plant. This means that they must ensure, so far as is reasonably practicable, that the plant is safe to use and properly maintained. They must also provide specific information with the plant about how to operate it safely.

In most cases the supplier will be responsible for inspecting and maintaining the plant. However, if the plant is to be hired for an extended period of time, you and the supplier may develop arrangements to ensure that the plant is adequately inspected and maintained throughout the lease. This may involve the supplier coming to your workplace to maintain the plant, or you maintaining the plant while it is at your workplace.

The arrangements you make will depend on your ability to inspect and maintain the plant in accordance with the manufacturer's specifications. If you choose to maintain the plant yourself during the lease, you should provide all information and records about the maintenance to the hirer at the end of the lease.

3.2 Installation and commissioning of plant

Regulation 204: A person with management or control of plant at a workplace must ensure that:

- plant is not commissioned unless the person has established that the plant is, so far as reasonably practicable, without risks to the health and safety of any person
- the person installing or commissioning the plant is a competent person, and is provided with all the information necessary to minimise risks to health and safety
- the processes for the installation, construction and commissioning of plant include inspections that ensure, so far as is reasonably practicable, the risks are monitored.

Installing plant

An installer should ensure:

- plant is erected or installed in having regard to the manufacturer's instructions including ensuring that specialised tools, jigs and appliances necessary to minimise any risk of injury during installation are used
- access to and egress from plant complies with relevant standards
- plant is stable during installation
- the interaction of plant with people, work processes and other plant is considered
- environmental factors affecting installation and use (e.g. wet conditions) are considered
- all electrical installations associated with plant comply with AS 3000 (also known as the Australian/New Zealand Wiring Rules) as far as it is relevant.

The installer should notify the designer, manufacturer, supplier and/or the person with management or control of plant of any new risks identified during the installation of the plant.

Positioning plant in the workplace

Plant should be positioned so that:

- risks from hot plant (such as friction, molten material, hot gases) are controlled through restricted access, guarding or insulation
- there is sufficient space (suggested 600 mm, the minimum width of a walkway) for safe access to the plant for operation, cleaning, maintenance, inspection and emergency evacuation
- the plant does not obstruct doorways and emergency exits
- the proximity to other plant does not have a negative effect on the operation of the plant or work processes
- the plant rests on a suitable foundation where required (e.g. on a floor or other support that ensures the plant is stable and secure)
- ventilation is adequate to deal with the nature and volume of any emissions from the plant
- workers and others are not exposed to noise levels greater than those stated in the exposure standard for noise under the Regulation.

Commissioning plant

Commissioning plant involves performing the necessary adjustments, tests and inspections to ensure plant is in full working order to specified requirements before the plant is used.

Commissioning includes recommissioning.

The person who commissions plant should ensure that:

- the commissioning sequence is in accordance with the design specifications
- tests, such as dummy runs, are carried out to check that the plant will perform within the design specifications.

3.3 Instruction, training and supervision

Before plant is used in your workplace, you must provide your workers and other persons who are to use the plant with information, training, instruction or supervision that is necessary to protect them from risks arising from the use of the plant.

You must also provide the necessary safety information to persons who are involved in installing, commissioning, testing, maintaining or repairing plant, as well as decommissioning, dismantling or disposing of plant. This should include information on the types of hazards and risks the plant may pose to the person when they are carrying out these activities.

This information may be supported with safe work procedures that include instructions on:

- the correct use of guarding and other control measures
- how to safely access and operate the plant
- who may use an item of plant, for example only authorised or licensed operators
- how to carry out inspections, shut-down, cleaning, repair and maintenance
- traffic rules, rights of way, clearances and no-go areas for mobile plant
- emergency procedures.

Any emergency instructions relating to an item of plant should be clearly displayed on or near it.

Training programs should be practical and 'hands on' and take into account the particular needs of workers, for example literacy levels, work experience and specific skills required for safe use of the plant.

Supervisors should take action to correct any unsafe work practices associated with plant as soon as possible, otherwise workers may think that unsafe work practices are acceptable.

3.4 Using plant in the workplace

Regulation sections 205-206: A person with management or control of plant at a workplace must:

- so far as is reasonably practicable, prevent unauthorised alterations to or interference with the plant
- take all reasonable steps to ensure the plant is only used for the purpose for which it is designed, unless a competent person has assessed that the proposed use does not increase the risk to health and safety
- ensure all safety features, warning devices, guarding, operational controls, emergency stops are used in accordance with instructions and information provided.

Workers who operate plant should be competent, or suitably supervised during training, so that they do not put themselves or others at risk. It is important to retain all operating manuals and instructional material provided by the manufacturer in order to correctly operate and maintain the plant once it is in the workplace. You should also consider and address the risks that may arise from:

- operator fitness for work, for example fatigue
- carrying out routine or repetitive tasks
- local conditions and working procedures.

High risk work licences

Certain types of plant, such as industrial lift trucks and some types of cranes, require the operator to have a high risk work licence before they can operate the plant. Schedule 3 of the Regulation sets out the classes of high risk work licences and the types of plant involved.

3.5 Making changes

If you intend to alter the design of the plant, change the way the plant is used or change a system of work associated with the plant, you should carry out the risk management process again.

If you intend to use plant in a different way or for a purpose that it was not designed for, you must ensure that the risks associated with the new use are assessed by a competent person. For example, if an item of plant that is designed to cut wood is intended to be used to cut metal, all hazards associated with that use must be identified and the appropriate controls implemented. This may mean the provision of a lubricating and/or cooling fluid system to ensure that the cutting process does not generate excess friction or heat.

The competent person's assessment should:

- include all aspects of the proposed task
- outline the reasons a purpose-designed item of plant cannot be used for the proposed task, such as the impracticability of using it or additional risks that using purpose-designed plant would generate
- take into account the recommendations of the designer, manufacturer or supplier of the plant and ensure the proposed use is not outside its capabilities
- identify differences between the item of plant and one that is purpose-designed for the task, and describe measures used to control the risks that such plant is designed to control
- amend any relevant documentation, for example, operator and maintenance manuals and signage.

If a competent person decides that the plant is not suitable for the proposed task, it must not be used for that task.

Making alterations to plant

Prior to making any alterations to plant you should consult with the designer and manufacturer to ensure all relevant safety issues have been considered. Any alterations you make to the plant will result in you assuming the obligations of a designer or manufacturer.

If the original designer or manufacturer cannot be contacted (for older plant or imported plant) the alterations should be carried out by a competent person in accordance with the relevant technical standards. See Appendix C for examples of published technical standards.

In the case of plant that requires design registration, the altered design must be registered if the alteration to the design may affect health and safety.

Plant should be isolated from power sources and be unable to be switched on or activated accidentally before alterations begin or while alterations are being carried out.

Before returning altered plant to service you should:

- have control measures in place to eliminate or, where that is not reasonably practicable, minimise any risks created by the alteration including providing information and training for users and supervisors about the changes
- inspect and test the plant, having regard to the altered design specifications and relevant technical standards.

3.6 Inspecting plant

Regulation section 213: A person with management or control of plant at a workplace must ensure that maintenance, inspection, and if necessary testing, of plant is carried out by a competent person in accordance with manufacturer's recommendations, or if those aren't available, in accordance with recommendations of a competent person. If it is not reasonably practicable to comply with the manufacturer's recommendations or the recommendations of a competent person, the inspection and testing must occur annually.

The inspection of plant should be conducted in accordance with a regular maintenance system to identify any:

- potential problems that were not anticipated during plant design or task analysis
- deficiencies in plant or the equipment associated with use of plant (e.g. wear and tear, corrosion and damaged plant parts)
- adverse effects of changes in processes or materials associated with plant
- inadequacies in control measures that have been previously implemented.

Inspection of associated work processes should be conducted regularly to identify any:

- unsafe work practices associated with the use of plant
- negative effects of changes in processes or materials associated with plant
- inadequacies in control measures that have been previously implemented.

Regularly inspect hand-held powered plant and repair or replace them when necessary, and replace damaged or worn parts (such as grinding wheels).

Any control measures implemented, such as guards and warning devices, must be regularly inspected and tested to ensure they remain effective.

You should keep an up-to-date register of the items of plant requiring regular inspection and maintenance. It should include information on:

- allocated responsibilities for people dealing with inspections
- standards against which plant should be inspected
- the frequency of inspections
- critical safety instructions to be followed during inspection, for example the isolation procedure
- the procedures for particular types of inspections including:
 - periodic inspections
 - specific tests
 - repaired or modified plant
- any variations from normal operation or dangerous occurrences and any trends that may be occurring.

Reasonably practicable control measures must be implemented to ensure the health and safety of the person conducting the inspection, for example by ensuring that plant is switched off or isolated from the energy source to avoid accidental re-energising of dangerous parts.

Any guards that are removed must be replaced correctly to prevent access to the hazardous part of the plant when it is returned to use.

3.7 Maintenance, repair and cleaning of plant

Plant must be maintained and repaired according to the manufacturer's specifications or, in the absence of such specifications, in accordance with a competent person's recommendations. For example, ensure fluid levels and pressures are correct and ensure brakes are functioning properly.

Plant should be isolated before maintenance or cleaning commences. Where plant is isolated and plant shutdown will result, any total or partial shutdown should not allow a hazardous situation to be created.

Isolated or disengaged plant should:

- not hinder or interfere with the operation of any other plant
- have guards in place where a risk of injury is identified
- not obstruct access.

A process should be put in place to enable effective communication and consultation with affected workers and other persons conducting a business or undertaking to prevent any risk to health and safety arising from restarting the operation of the plant which has been shut down due to inspection, maintenance or cleaning.

Where plant cannot be isolated, methods to prevent accidental operation must be implemented. The work should be carried out under controlled procedures to allow for maintenance and cleaning without risk to the health and safety of the person performing the work.

Regulation section 210: If there is a need to operate plant during maintenance or cleaning, the person with management or control of the plant must ensure that the operators' controls allow the safe operation of the plant while a person is undertaking the maintenance or cleaning.

If the plant is operated by a person other than the person who is carrying out the maintenance or cleaning, the person operating the plant must be authorised to do so by the person with management or control of the plant.

Following maintenance all guarding must be replaced prior to start-up of plant.

Damaged plant should be withdrawn from service until any risks to health and safety have been controlled.

3.8 Storing plant

Regulation section 207: A person with management or control of plant at a workplace must ensure that plant not in use is left in a state that does not create a risk to the health or safety of any person.

Plant that is not in use must be stored so that it does not create a risk to workers or other people in the workplace. Where plant is to be placed in storage, you should:

- ensure relevant health and safety information supplied by the designer or manufacturer is provided to the person who is to dismantle or store the plant
- implement control measures to eliminate or, if that is not reasonably practicable, minimise the risks of damage to plant during storage, for example from corrosion as a result of exposure to residues of hazardous substances and deterioration of consumables.

Before plant is used after an extended period of storage, the plant should be re-commissioned by carrying out the same level of testing and inspection when it was first commissioned.

Plant that has been taken off-line constitutes plant not in use. For example, an automatic robot on a welding line may be taken off-line due to a product design modification no longer requiring the use of the robot for the particular product. The robot is therefore still fully functional but is no longer in use. The robot must not be left in a state that presents a risk to health or safety. This may be done by isolating the work station from the power supply, employing lock-out and tag-out systems, and providing physical stops to prevent movement in the event of accidental

powering of the plant. Further information on isolating energy sources is provided at Section 4.5 of this code.

Powered mobile plant may present a risk to health or safety if measures are not taken to prevent the plant moving of its own accord (for example rolling down a sloping surface) or to prevent unauthorised operation. For example, an industrial lift truck at the end of or during a shift is plant that is frequently not in use and unattended for short periods of time. The person with management or control should ensure that the operator of the truck understands the required safety procedures when leaving the truck unattended. This would include ensuring that the truck has been parked on a firm, level surface with the handbrake applied, the motor switched off and rendered inoperable, for example by removing the key.

3.9 Decommissioning, dismantling and disposing of plant

Regulation section 204: A person with management or control of plant at a workplace must ensure that:

- plant is not decommissioned or dismantled unless it can be carried out without risks to health and safety so far as is reasonably practicable
- the person who decommissions or dismantles the plant is a competent person and is provided with all available information necessary to eliminate, or where this is not reasonably practicable, minimise risks to health and safety
- the processes associated with the decommissioning and dismantling include inspections to ensure, so far as is reasonably practicable, that risks associated with these activities are monitored.

You should identify any hazards inherent in the process of decommissioning and dismantling the plant (for example exposure to hazardous substances). The plant should be dismantled in accordance with the designer's and manufacturer's instructions.

Disposing of plant may include reselling (in full or part) or scrapping (waste disposal and/or recycling). If the plant is to be resold, the seller will take on the duties of a person that supplies plant. The seller should ensure that the plant is safe to load, transport, unload and store. Any information relating to the plant design, registration, installation, operation and/or maintenance must be provided with the plant to the reseller or buyer.

If the plant is to be scrapped, you should consult with local waste disposal authorities or organisations so that the plant is safe to load, transport, unload and dispose of.

If the plant is to be used for scrap or spare parts, you must inform the person you are supplying the plant to that the plant is being supplied as scrap or spare parts and that the plant in its current form is not to be used as plant. This must be done in writing or by marking the item of plant.

4 Specific control measures

4.1 Guarding plant

A guard is a physical or other barrier that can perform several functions including:

- preventing contact with moving parts or controlling access to dangerous areas of plant
- screening harmful emissions such as radiation
- minimising noise through the application of sound-absorbing materials
- preventing ejected parts or off-cuts from striking people.

Regulation section 208: If guarding is used, the person with management and control must ensure that:

- if access to the area of plant requiring guarding is not necessary during operation, maintenance or cleaning, the guarding is a permanently fixed barrier
- if access to the areas requiring guarding is necessary during operation, maintenance or cleaning, the guarding is an interlocked physical barrier
- if it is not reasonably practicable to use a permanently fixed barrier or an interlocked physical barrier, the guarding is a physical barrier that can only be altered or removed using a tool
- if it is not reasonably practicable to use a permanently fixed barrier, an interlocked physical barrier or a physical barrier fixed in position, the guarding includes a presence-sensing safeguarding system.

Guarding must:

- be of solid construction and securely mounted so as to resist impact or shock
- prevent by-passing or disabling of the guard
- not create a risk in itself (for example it must not obstruct operator visibility, weaken the plant, cause discomfort to operators or introduce new hazards such as pinch points, rough or sharp edges)
- be properly maintained
- control any risk from potential broken or ejected parts and workpieces
- allow for servicing, maintenance and repair to be undertaken with relative ease, and
- if guarding is removed the plant cannot be restarted unless the guarding is replaced.

Permanently fixed physical barriers

Permanently fixed physical barriers are designed to be welded or incorporated into the body of the machine. In Figure 1, the plant's power transmission is not required to be accessed during normal operation, maintenance or cleaning. It is therefore practicable to have the gear arrangements enclosed in gearbox housing to prevent access to moving gears. This has eliminated the risk associated with entanglement.

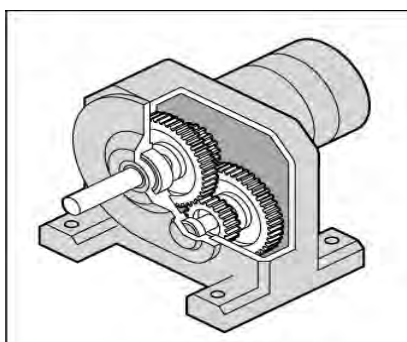


Figure 1 Cut-away view of a fixed physical barrier encasing the gear assembly and electric motor

Interlocked physical barriers

An interlock guard is connected to the plant's operational controls so that the plant is prevented from operating until the guard is closed. The guard cannot be opened or removed until the dangerous parts of the machine have fully come to rest. In Figure 2, the hinged top guard on the food mixer has a positively operating insertion key which automatically cuts off the plant's power when the lid is opened or removed. This allows the blades to come to rest. If the moving parts do not stop immediately once the power is cut off, then a guard should be designed to delay release of the locking mechanism until the moving parts have stopped.

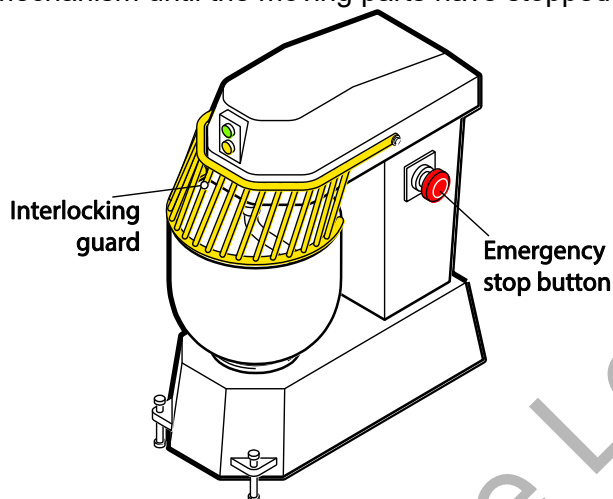


Figure 2 Food mixer with interlocking guard

Physical barriers fixed in position

Physical barriers that are securely fixed in position should be easy to remove and replace but only with the aid of a special tool, such as a spanner, Allen key or similar tool, and only when the machine is not in operation (see Figure 3). Devices such as wing nuts or wedge inserts, which can be operated using fingers or become stuck, should not be used.

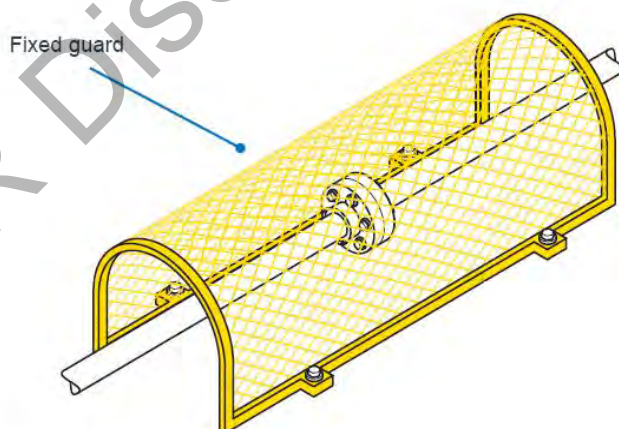


Figure 3 Fixed guard on rotating shaft or coupling

Physical barriers such as perimeter fences securely fixed in position may prevent access to dangerous areas. Any access points, for example gates and doors, should be secured with a lock and key or an interlocking system (see Figure 4). Isolation procedures may be necessary where there is a danger of machines activating while a person is inside the barrier. For example, when an interlocked door is accidentally closed the machine should not automatically restart.

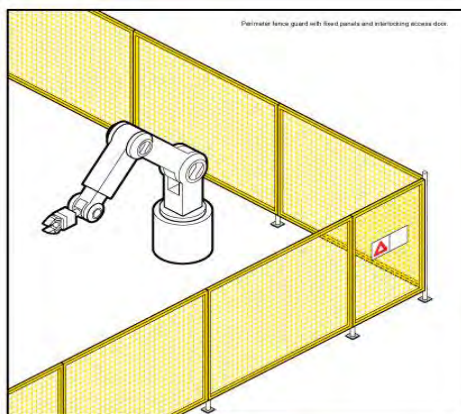


Figure 4 Perimeter fence guard with fixed panels and interlocking access door

Adjustable guarding incorporates movable sections or panels of the guard to allow materials to be fed into the guarded area while still preventing physical contact (see Figure 5).

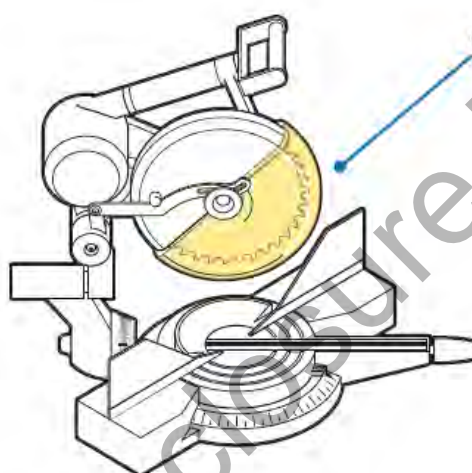


Figure 5 Self-adjusting guard for a drop saw

Physical barrier guarding should be strong enough to resist normal wear and shock that may arise from failure of the parts or processes being guarded; and to withstand prolonged use with a minimum of maintenance.

Presence sensing systems

If physical guards are not reasonably practicable, then a presence sensing system can be used to control the risk. These systems detect when a person (or part of a person's body) enters the danger zone and stops the machine. Photoelectric light beams, laser scanners and foot pressure mats are examples of these type of guards. They rely on sensitive trip mechanisms and the machine being able to stop quickly, which may be assisted by a brake (see Figures 6 and 7).

Effective presence-sensing safeguard systems require the selection of a trip device appropriate for the work being done, and the correct location of beams with light activated devices, taking into account speed of entry and machine stopping time.

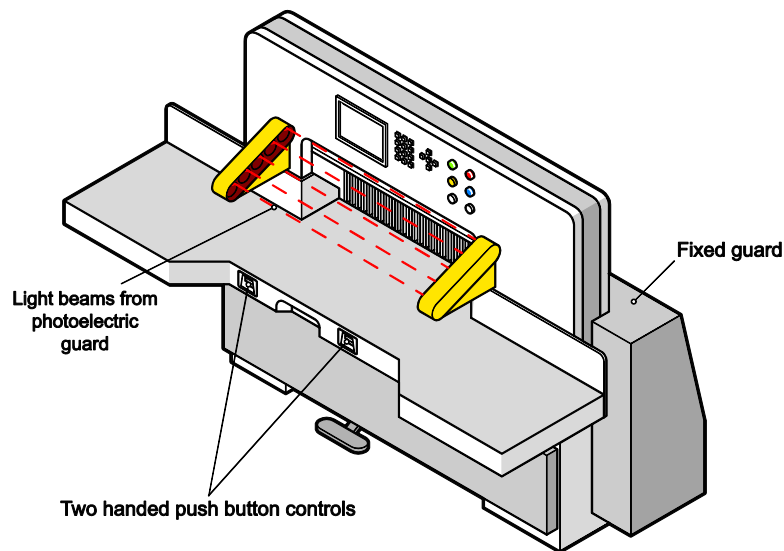


Figure 6 Paper cutting guillotine with a combination of guards including a photoelectric light curtain.

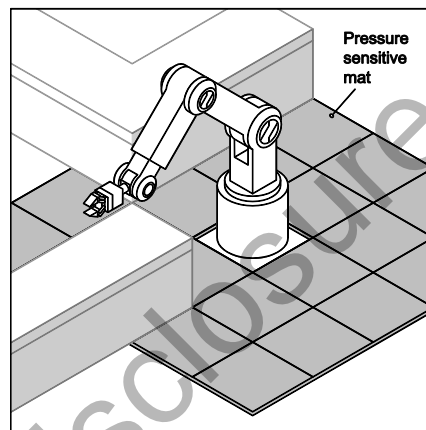


Figure 7 Pressure sensitive mat

Environmental factors

When using a guard you should consider the environment in which it may be used. Some examples of poor guard selection include: guards on high frequency welders that become electrically charged, heating of guards in hot processes and wire mesh guards on machines emitting splashes.

If a guard is likely to be exposed to corrosion, you should consider corrosion-resistant materials or surface coatings.

Colour coding

It is good practice for all guards to be painted the same colour. For example:

- use high visibility yellow, provided it is different to the plant's colour, so that it can be clearly seen when a guard has been removed or when it is not in its proper place
- paint the surfaces behind the guard a contrasting or bright colour so that when the guard is removed, the exposed colour is clearly visible and it is easy to identify that the guard has been removed, alerting workers to possible danger.

For some types of plant, it may be necessary to choose colours that contrast with workpieces, where these need to be visible through the guarding.

Removal of guarding

If any type of guarding is removed for the purposes of maintenance or cleaning, it must be replaced before the plant is put back into normal operation. The plant should not be able to restart unless the guarding is in place. When removing guarding, eliminate the energy source by disconnecting the power supply or by locking out motive power sources.

4.2 Operator controls

Regulation section 210: A person with management or control of plant at a workplace must ensure that any operator controls are:

- identified so as to indicate their nature, function and direction of operation
- located so they can be readily and conveniently operated
- located or guarded to prevent unintentional activation
- able to be locked into the 'off' position to enable disconnection from energy sources.

Badly designed operator controls can lead to unintentional and unsafe operation of plant. For example, a control for setting the speed on a saw should not be a simple slider or rotary control that may be accidentally adjusted during operation. It should be graduated in fixed lockable steps.

Operator control devices should be designed:

- to enable the plant to be 'fail safe'. For example, when hand pressure is released on a lever controlling up and down movement, the lever will return to the neutral position and movement will stop
- to be within easy access of the operator
- so the intended function can be easily read and understood, especially in the case of dials and gauges
- so the movement of the control is consistent with established convention, for example anticlockwise to open, clockwise to close
- so the desired effect can only occur by intentional operation of a control, for example provision of a starting control
- to withstand the rigours of normal use, undue forces and environmental conditions
- so they are located outside danger zones
- so they are readily accessible for maintenance.

4.3 Emergency stops

Regulation section 211: If the design of plant at a workplace includes an emergency stop control, the person with management or control of the plant must ensure that:

- the stop control is prominent, clearly and durably marked and immediately accessible to each operator of the plant
- any handle, bar or push button associated with the stop control are coloured red
- the stop control cannot be adversely affected by electrical or electronic circuit malfunction.

Where plant is designed to be operated or attended by more than one person and more than one control is fitted, the multiple controls must be of the 'stop and lock-off' type so that the plant cannot be restarted after a stop control has been used unless each activated stop control is reset.

Emergency stop devices should not be the only method of controlling risks. They should be designed as a back-up to other control measures.

Once engaged, the emergency stop controls should remain that way. It should only be possible to disengage the emergency stop controls by a deliberate action. Disengaging the emergency stop control should not restart the plant. It should only allow the normal starting sequence to be activated.

In the case of plant or parts of plant designed to work together, stop controls (including the emergency stop control) should be capable of stopping the plant itself as well as all the equipment interrelated to its operation, where continued operation of this related equipment may be dangerous.



Figure 8 Emergency stop button

4.4 Warning devices

Regulation section 212: A person with management or control of plant at a workplace must ensure that an emergency warning device is positioned on the plant to ensure that the warning device will work to best effect.

Regulation section 215: If there is a possibility of the plant colliding with pedestrians or other powered mobile plant, the person with management or control of the plant must ensure that the plant has a warning device that will warn persons who may be at risk from the movement of the plant.

Warning devices should be used where there is a likelihood of moving plant colliding with other plant or workers in the vicinity of the plant. There are a number of warning devices that can be fitted to moving plant to alert the operator and others in the workplace.

Automatic audible alarms

Automatic audible alarms are usually fitted to warn of forward or reversing movement. These alarms emit an intermittent sound which is activated when the gear or drive lever is engaged.

If automatic audible alarms are used, the sound should be distinct and clearly audible only in the hazard area. If several items of plant are using the same warning device it may be difficult for workers to be aware of which item of plant is moving or is about to move. It is also possible that workers will become desensitised to the sound. For this reason it may be more effective to combine audible alarms with other warning devices, such as flashing lights.

Motion sensors

Motion sensors also warn with sound. They are sensitive to movement and are activated by motion in the required direction. These devices are suitable for plant that moves suddenly in any direction, such as rollers, bulldozers, excavators, boom lifts or scissor lifts.

Motion sensor alarms usually deactivate after a short time. They should not be deactivated if the operator has restricted vision when reversing.

Lights

Lights are usually used to warn of forward and reversing movement. These lights are wired to operate continuously or in hazard mode by flashing, usually when reversing. They generally work when the gear or drive lever is engaged.

It is important to choose the intensity and colour of the lights appropriate to your workplace to ensure that the moving plant can be seen. For example, an orange warning light may be suitable inside a warehouse but may not be seen in sunlight.

Flashing lights

Rotary flashing lights are coloured revolving lights that are usually mounted in a prominent place, such as the top of a vehicle cabin. They can be wired to operate continuously or activated by a switch. They are suitable to be used on any items of plant that moves in the workplace, such as forklifts or skid steer loaders.

Flashing lights may not be suitable for plant that:

- is stationary for long periods of time
- operates in restricted areas, such as trucks travelling on defined site roads.

Percussion alarms

Percussion alarms are mechanical devices that are fitted to an axle or gear shift. When plant moves, a cam raises a hammer that drops repeatedly onto a bell or sounding plate. These alarms are relatively cheap to install, however they require regular maintenance to ensure they continue functioning effectively.

Radio sensing devices

Radio sensing devices activate when the operator selects reverse. A light and alarm sounds inside the cabin to alert the operator if a pedestrian is within a predetermined distance from the rear of the plant.

Air horns

Horns are suitable for powered mobile plant with long breaking distances, such as trucks. Some large workplace or sites may require a truck to “stop and sound horn before continuing”.

4.5 Isolation of energy sources

An isolation procedure is a set of predetermined steps that should be followed when workers are required to perform tasks such as maintenance, repair, installation and cleaning of plant.

Isolation procedures involve the isolation of all forms of potentially hazardous energy so that the plant does not move or start up accidentally. Isolation of plant also ensures that entry to a restricted area is controlled while the specific task is being carried out.

The lock-out process is the most effective isolation procedure. The process is as follows:

- shut down the machinery and equipment
- identify all energy sources and other hazards
- identify all isolation points
- isolate all energy sources
- control or de-energise all stored energy
- lock out all isolation points
- tag machinery controls, energy sources and other hazards

- test by 'trying' to reactivate the plant without exposing the tester or others to risk. Failure to reactivate the plant means that the isolation procedure is effective and that all stored energies have dissipated. This may require further measures to safely release these energies, for example hydraulic or pneumatic pressure, suspended weight or compressed springs.

In order for the isolation procedure to be effective, you should identify all energy sources likely to activate the plant or part of it and isolate or de-energise these to avoid the plant being inadvertently powered. Energy sources include:

- electricity (mains)
- battery or capacitor banks
- solar panels
- fuels
- heat
- steam
- fluids or gases under pressure (water, air, steam or hydraulic oil)
- stored energy (e.g. compressed springs)
- gravity, and
- radiation.

In order to isolate plant you should use a device that effectively locks out the isolation points. These devices include switches with built-in locks and lock-out circuit breakers, fuses and valves. Other devices include chains, safety lock-out jaws (also known as hasps) and safety padlocks.

When isolating an energy source you should use a lock that allows one or more padlocks to be fitted. If more than one person is working on the plant at the same time, you should ensure that each worker is able to attach a padlock to the device (see Figure 9). This will prevent access to the energy sources while the work is being carried out.

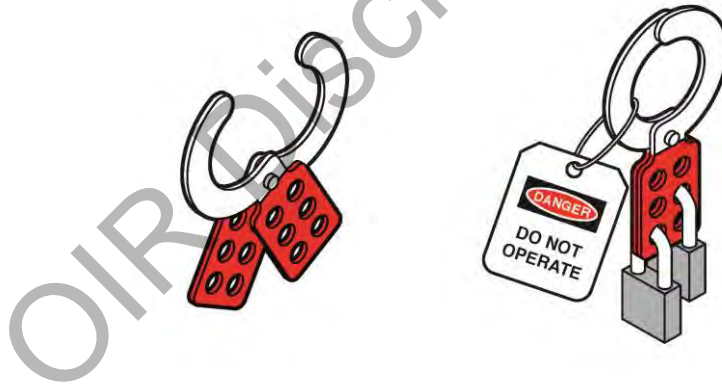


Figure 9 Example of lock-out with a tag and the padlocks of two workers

Another way to allow multiple locks to be used is to have one padlock on the isolation point, with the keys locked in a box that has been locked separately by each worker.

Each worker involved in the maintenance, cleaning or repair of the plant should have a lock, tag and key for each isolation point. There should be no duplicate key for any lock, except a master key that is kept in a secure location and should only be used in an emergency.

If more than one energy source needs to be isolated to enable safe shut-down of the plant, the single key to each lock-out device should be held by the same person.

Tags should only be used as a means of providing information to others at the workplace. A tag should not be used on its own as an isolation device; only a lock is effective at isolating the energy source.

5 Plant registration

Schedule 5 of the Regulation requires certain plant designs and items of plant to be registered (registrable plant). Schedule 5 is reproduced at Appendix A.

You must not allow the use of any registrable plant in the workplace if it has not been registered.

5.1 Design and altered design registration

You must register a plant design if:

- it has not already been design registered
- you alter the plant design by modifying the plant and the alterations to the design may affect health and safety.

In order to register a plant design, the design must be verified by a design verifier who must provide a statement that the design has been produced in accordance with published technical standards or engineering principles specified by the designer. Examples of published technical standards are provided at Appendix C.

A design can only be verified by a person who is eligible to be a design verifier under the Regulation. The types of people who would be competent to verify the design of plant may include someone who:

- has educational or vocational qualifications in an engineering discipline relevant to the design to be verified
- has knowledge of the technical standards relevant to the design to be verified
- has the skills necessary to independently verify that the design was produced in accordance with the published technical standards and engineering principles used in the design
- is certified by a body that is accredited or approved by the Joint Accreditation System—Australia and New Zealand or an equivalent overseas body to undertake conformity assessments of the design against the relevant technical standards.

For example, this could include someone who is registered on the National Professional Engineers Register administered by the Institution of Engineers Australia and is determined by that Institution to be competent to design or inspect the relevant type of plant, or is a member of the Institution of Engineers Australia with the status of Chartered Professional Engineer.

When registering a plant design, the regulator will issue a plant design registration number. This number must then be given to the manufacturer, importer or supplier of plant. These duty holders must ensure that the design registration number is provided to the person with management or control of plant at the workplace.

The person with management or control of plant at the workplace must then ensure that the design registration number is kept readily accessible in the vicinity of the plant at all times. A reliable way to achieve this is to permanently mark the design registration number on the plant.

Changes to design registration

If a registered plant design is altered so as to require any new risk control measures, the altered design must be registered.

5.2 Item registration

A person with management or control of an item of plant specified in Part 2 of Schedule 5 of the Regulation must apply to the regulator to register that item of plant.

In order to have an item of plant registered, the item must be inspected and a statement provided by a competent person stating that the plant is safe to operate. A person is competent to inspect an item of plant if the person has educational or vocational qualifications in an engineering discipline relevant to the plant, or knowledge of the technical standards relevant to the plant to be inspected.

If the design of the plant was also required to be registered, the design registration number must be included with the application.

Duration of registration

Registration of an item of plant applies for five years, and takes effect on the day the registration is granted and expires five years after that date.

Once the item of plant is registered

When the item of plant is registered, the regulator will issue a registration document. This document will list the name of the registration holder, any associated business name, the registration number and the date of effect of the registration. This document must be kept and made available for any inspection required under the Act.

If it is lost, stolen or destroyed, you will need to apply to the regulator that registered the plant for a replacement document as soon as possible, outlining the reasons for needing a replacement.

The regulator may impose any conditions it considers appropriate on the registration of the plant including conditions in relation to the use and maintenance of the plant, record keeping or provision of information to the regulator.

You must ensure that the item registration number is permanently marked on the item of plant in a location that is readily accessible. It will generally be a simple task to mark large items of plant with the item registration number by either etching the number in place or by fixing the number in place on a plate in a position that will not lead to damage or removal over time.

On some items, such as a tower crane that may comprise many parts assembled in a variable configuration to suit a particular site, it may not be feasible to mark each component of the plant. In such cases the item registration number should be marked on those components that are readily accessible and able to be seen when the crane is fully assembled.

Registration renewal

The registration of the item of plant will expire exactly five years from the date that the registration is granted. To renew the registration for the item of plant you must apply to the regulator before the registration expires.

Changes to item registration

If there is any change to any information provided at the time of item registration, or in relation to the registration itself, you have 14 days to advise the regulator of the change. This must be done in writing. In particular, you must provide written notice to the regulator if:

- the item of plant is altered to the extent that it requires new risk control measures
- the item of plant is usually fixed but has been moved
- the registration holder no longer has management or control of the item of plant.

6 Keeping records

Regulation section 237: A person with management and control of plant must keep a record for plant that requires design or item registration including records of all tests, inspections, maintenance, commissioning, decommissioning, dismantling and alterations of the plant.

These records must be kept for the period the plant is used or until the person relinquishes control of the plant.

The records must be available for inspection under the Act and be made available to any person to whom the person relinquishes control of the plant, for example if you sell the plant, those records should be transferred to the person who purchased the plant.

If there is a presence sensing safeguarding system at a workplace the person with management or control of the plant must keep a record of safety integrity tests, inspections, maintenance, commissioning, decommissioning, dismantling or alterations for the life of the plant or until control is relinquished or in any other case for five years.

While you must keep records associated with plant requiring design or item registration, it is good practice to keep records for other types of plant in your workplace. Keeping records of the risk management process demonstrates potential compliance with the Act and Regulation. It also helps when undertaking subsequent risk assessments.

Records on items of plant that may be kept could include:

- the unique plant identification number
- plant design registration information
- relevant data from commissioning
- compliance statements and/or test certificates
- manufacturer's specifications and user manuals
- results of inspections
- results of tests on the plant including safety devices (for example, protective earth continuity tests, testing of mechanical guarding, stop time measurement)
- information on maintenance and major repairs carried out
- information on major modifications
- information on use that deviates from intended operating or design conditions
- results of risk assessments carried out on plant
- information, instruction and training provided to workers
- competencies of operators.

Appendix A – Registrable plant

List of plant requiring registration of design as outlined in schedule 5 (Part 1) of the Regulation

- Pressure equipment, other than pressure piping, and categorised as hazard level A, B, C or D according to the criteria in Section 2.1 of AS 4343: Pressure equipment – hazard levels.
- Gas cylinders covered by Part 1.1 of AS 2030.1-2009: *Gas cylinders - General requirements*.
- Tower cranes including self-erecting tower cranes.
- Lifts including escalators and moving walkways.
- Building maintenance units.
- Hoists with a platform movement exceeding 2.4 metres, designed to lift people.
- Work boxes designed to be suspended from cranes.
- Amusement devices covered by Section 2.1 of AS 3533.1-2009: *Amusement Rides and Devices – Design and construction* except amusement devices noted below.
- Passenger ropeways.
- Concrete placing booms.
- Prefabricated scaffolding.
- Boom-type elevating work platforms.
- Gantry cranes with a safe working load greater than five tonnes or bridge cranes with a safe working load of greater than 10 tonnes, and any gantry crane or bridge crane which is designed to handle molten metal or Schedule 11 hazardous chemicals.
- Vehicle hoists.
- Mast climbing work platforms.
- Mobile cranes with a rated capacity of greater than 10 tonnes.

Note: The plant listed as requiring design registration does not include:

- a heritage boiler
- any pressure equipment – other than a gas cylinder – excluded from the scope of AS 1200:2000: *Pressure equipment* – see section A1 of Appendix A to AS/NZS 1200:2000
- a crane or hoist that is manually powered
- a reach stacker
- an elevating work platform that is a scissor lift or a vertically moving platform
- a tow truck
- certain amusement devices including:
 - class 1 devices
 - playground structures
 - water slides where water facilitates patrons to slide easily, predominantly under gravity, along a static structure
 - wave generators where patrons do not come into contact with the parts of machinery used for generating water waves
 - inflatable devices, or other than inflatable devices-continuous blown-with a platform height of three metres or more.

List of plant items requiring registration as outlined in schedule 5 (Part 2) of the Regulation

- Boilers categorised as hazard level A, B or C according to criteria in Section 2.1 of AS 4343: *Pressure equipment - hazard levels*.
- Pressure vessels categorised as hazard level A, B or C according to the criteria in Section 2.1 of AS 4343-2005: *Pressure equipment - hazard levels*, except for gas cylinders; LP Gas fuel vessels for automotive use, and serially produced vessels.
- Tower cranes including self-erecting tower cranes.
- Lifts including escalators and moving walkways.
- Building maintenance units.
- Amusement devices covered by Section 2.1 of AS 3533.1:2009: *Amusement Rides and Devices*, except for certain Class 1 structures (see below).
- Concrete placement units with delivery booms.
- Mobile cranes with a rated capacity of greater than 10 tonnes.

Note: The plant listed as requiring item registration does not include:

- any pressure equipment-other than a gas cylinder-excluded from the scope of AS/NZS 1200:2000: *Pressure equipment* – see section A1 of Appendix A to AS/NZS 1200:2000
- a crane or hoist that is manually powered
- a reach stacker
- certain amusement devices including:
 - class 1 devices
 - playground devices
 - water slides where water facilitates patrons to slide easily, predominantly under gravity, along a static structure
 - wave generators where patrons do not come into contact with the parts of machinery used for generating water waves, and
 - inflatable devices, or other than inflatable devices-continuously blown-with a platform height of three metres or more.

Appendix B – Hazard checklist

Description of plant: _____ Activities (e.g. use, cleaning and maintenance): _____ Assessed by: _____ Date: _____ 'Yes' to any of the following indicates the need to implement appropriate control measures		
Entanglement	Yes	No
Can a person's hair, clothing, gloves, necktie, jewellery, cleaning brush or rag become entangled with moving parts of the plant?		
Crushing	Yes	No
Can anyone be crushed due to: <ul style="list-style-type: none"> • material falling off the plant? • uncontrolled or unexpected movement of the plant? • lack of capacity for the plant to be slowed, stopped or immobilised? • the plant tipping or rolling over? • parts of the plant collapsing? • coming into contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair? • being thrown off or under plant? • being trapped between the plant and materials or fixed structures? • other factors not mentioned? 		
Cutting, stabbing or puncturing	Yes	No
Can anyone be stabbed or punctured due to: <ul style="list-style-type: none"> • coming in contact with sharp or flying objects? • coming in contact with moving parts during testing, inspection, operation, maintenance, cleaning or repair? • the plant, parts of the plant or work pieces disintegrating? • work pieces being ejected? • the mobility of the plant? • uncontrolled or unexpected movement of the plant? • other factors not mentioned? 		
Shearing	Yes	No
Can anyone's body parts be sheared between two parts of the plant, or between a part of the plant and a work piece or structure?		

Striking	Yes	No
<p>Can anyone be struck by moving objects due to:</p> <ul style="list-style-type: none"> • uncontrolled or unexpected movement of the plant or material handled by the plant? • the plant, parts of the plant or work pieces disintegrating? • work pieces being ejected? • mobility of the plant? • other factors not mentioned? 		
High pressure fluid	Yes	No
<p>Can anyone come into contact with fluids under high pressure, due to plant failure or misuse of the plant?</p>		
Electrical	Yes	No
<p>Can anyone be injured by electrical shock or burnt due to:</p> <ul style="list-style-type: none"> • the plant contacting live electrical conductors? • the plant working in close proximity to electrical conductors? • overload of electrical circuits? • damaged or poorly maintained electrical leads and cables? • damaged electrical switches? • water near electrical equipment? • lack of isolation procedures? • other factors not mentioned? 		
Explosion	Yes	No
<p>Can anyone be injured by explosion of gases, vapours, liquids, dusts or other substances, triggered by the operation of the plant or by material handled by the plant?</p>		
Slipping, tripping and falling	Yes	No
<p>Can anyone using the plant, or in the vicinity of the plant, slip, trip or fall due to:</p> <ul style="list-style-type: none"> • uneven or slippery work surfaces? • poor housekeeping e.g. offcuts, cables, hoses obstructing walkways, spills not cleaned up? • obstacles being placed in the vicinity of the plant? • other factors not mentioned? 		
<p>Can anyone fall from a height due to:</p> <ul style="list-style-type: none"> • lack of a proper work platform? • lack of proper stairs or ladders? • lack of guardrails or other suitable edge protection? • unprotected holes, penetrations or gaps? • poor floor or walking surfaces, such as the lack of a slip-resistant surface? • steep walking surfaces? • collapse of the supporting structure? • other factors not mentioned? 		

Ergonomic	Yes	No
<p>Can anyone be injured due to:</p> <ul style="list-style-type: none"> • poorly designed seating? • poorly designed operator controls? • high forces? • repetitive movements? • awkward body posture or the need for excessive effort? • vibration? • other factors not mentioned? 		
Combination of hazards	Yes	No
<p>Can anyone be injured due to unexpected start-up, unexpected over-run/over-speed (or similar malfunction) from:</p> <ul style="list-style-type: none"> • failure/disorder of the control system(e.g. a hydraulic system)? • restoration of energy supply after an interruption? • external influences on electrical equipment? • other environmental factors (gravity, wind, etc.)? • errors in the software? • errors made by the operator? 		
Other hazards	Yes	No
<p>Can anyone be injured due to:</p> <ul style="list-style-type: none"> • noise? • inadequate or poorly placed lighting? • entry into any confined spaces of the plant? • failure to select plant that is suitable for its intended use? • contact with hot or cold parts of plant? • exposure to hazardous chemicals, radiation or other emissions released by the plant? • lack of operator competency? • other factors not mentioned? 		

Appendix C – Examples of technical standards

The following table is a list of published technical standards that provide guidance on the design, manufacture and use of certain types of plant. These technical standards provide guidance only and compliance with them does not guarantee compliance with the Act and Regulation in all instances. This list is not exhaustive.

Plant description	Reference number	Standard title	Design	Make	Use
Amusement Structures	AS 3533	<i>Amusement Rides and Devices</i>	•	•	•
Cranes including hoists and winches	AS 1418 (Series)	<i>Cranes Including Hoists and Winches</i>	•	•	
	AS 4991 - 2004	<i>Lifting devices</i>	•	•	•
	AS 2550 (Series)	<i>Cranes – Safe use</i>			•
Conveyers	AS 1755 - 2000	<i>Conveyers - Safety requirements</i>	•	•	•
Electrical installation	AS 3000	<i>Electrical installation (known as the Aust/NZ wiring rules)</i>			•
Electrical installation within an industrial plant	AS/IEC 60204.1	<i>Safety of machinery: Electrical equipment of machines-General requirements</i>	•	•	
Earthmoving machinery	AS 2294.1	<i>Earthmoving machinery – Protective structures - General</i>	•	•	
	AS 2958.1	<i>Earthmoving Machinery – Safety – Wheeled machines-Brakes</i>	•	•	•
	ISO 6165	<i>Earthmoving machinery – Basic types – Identification and terms and definitions</i>	•		
	ISO 6746-1	<i>Earth-moving machinery - Definitions of dimensions and codes - Part 1: Base machine</i>	•		
	ISO 6746-2	<i>Earth-moving machinery - Definitions of dimensions and codes - Part 2: Equipment and attachments</i>	•		
	ISO 7133	<i>Earth-moving machinery - Tractor-scrapers – Terminology and commercial specifications</i>	•		
Explosive Powered tools	AS/NZS 1873 (Series)	<i>Power-actuated (PA) hand-held fastening tools.</i>	•	•	•
Hand-held electric tools	AS/NZS 60745	<i>Hand-held motor operated electric tools – Safety – General requirements</i>	•	•	•
Fall arrest	AS/NZS 1891.1	<i>Industrial fall-arrest systems and devices - Harnesses and ancillary equipment</i>	•	•	
	AS/NZS 1891.4	<i>Industrial fall-arrest systems and devices - Selection, use and maintenance</i>			•
	BS EN 1263-1:2002	<i>Safety nets-Safety requirements, test methods</i>	•		
Gas cylinders	AS 2030.1-1999	<i>Gas cylinders-General requirements (known as SAA Gas Cylinders Code)</i>	•	•	
	AS 2337.2 -2004	<i>Gas cylinder test stations</i>			•
	AS/NZS 3509	<i>LP (Liquefied Petroleum Gas) Fuel - Vessels for Automotive Use.</i>	•	•	

Plant description	Reference number	Standard title	Design	Make	Use
Industrial (Forklift) trucks	AS 2359 (Series)	<i>Powered industrial trucks</i>	•	•	•
Industrial rope access systems	AS 4488.2-1997	<i>Industrial rope access systems</i>	•	•	•
Lasers	AS/NZS 2211 (Series)	<i>Safety of laser products</i>	•	•	•
	AS 2397	<i>Safe use of lasers in the building and construction industry</i>			•
	AS/NZS IEC 60825.1: 2011	<i>Safety of laser products – Equipment classification and requirements</i>	•	•	•
Lifts	AS 1735 (Series)	<i>Lifts, escalators and moving walks (known as the SAA Lift Code)</i>	•	•	•
Machinery	AS 4024 (Series)	<i>Safety of machinery</i>	•	•	•
	AS 1657	<i>Fixed platforms, walkways, stairways and ladders-Design, construction and installation</i>	•	•	
	AS 1788.2 -1987	<i>Abrasive wheels-Selection, care and use</i>	•	•	•
	AS 1893-1977	<i>Code of practice for the guarding and safe use of metal and paper cutting guillotines</i>	•	•	•
	AS 2661-1983	<i>Vapour degreasing plant – Design, installation and operation – Safety requirements</i>	•	•	•
	AS/NZS 3947.3:2001	<i>Low-voltage switchgear and control gear, switches, disconnectors, switch-disconnectors and fuse combination units</i>	•		•
	AS 61508.6 -2011	<i>Functional safety of safety related systems</i>	•	•	•
	AS/IEC 61511	<i>Functional safety – Safety instrumented system for the process industry sector</i>	•	•	•
	AS 62061	<i>Safety of machinery: Functional safety of safety-related electrical, electronic and programmable electronic control systems</i>	•	•	•
	ISO 13849.1	<i>Safety of machinery: Safety-related parts of control systems-General principles</i>	•	•	•
	BS/IEC 6496-2:1997	<i>Safety of machinery, Electro sensitive protective equipment</i>	•		•
	AS 1121.1:2007	<i>Agricultural tractor power take-offs - rear-mounted power take-off types 1, 2 and 3 - General specifications, safety requirements, dimensions for master shield and clearance zone</i>	•	•	
	AS 1636	<i>Agricultural wheeled tractors - Roll-over protective structures criteria and tests</i>	•	•	
AS/NZS 2153.1:1997	<i>Tractors and machinery for agriculture and forestry - Technical means for ensuring safety - General</i>	•	•		
SAE J167-2011	<i>Overhead protection for agricultural tractors - Test procedures and performance requirements</i>	•	•		

Plant description	Reference number	Standard title	Design	Make	Use
Miniature boilers	AMBSC Code –Part 1	<i>Copper Boilers - Issue 7-2001</i>	•	•	
	AMBSC Code –Part 2	<i>Steel Boilers – Issue 4-1995</i>	•	•	
	AMBSC Code - Part 3	<i>Sub-Miniature Boilers – Issue 1-2008</i>	•	•	
	AMBSC Code – Part 4	<i>Duplex Boilers – Issue 1-2010</i>	•	•	
Pressure equipment	AS/NZS 1200:2000	<i>Pressure Equipment</i>	•	•	•
	AS 2593:2004	<i>Boilers – Safety management and supervision systems</i>	•		•
	AS 2971:2007	<i>Serially produced pressure vessels</i>	•	•	
	AS/NZS 3788:2006	<i>Boiler and pressure vessels – In service inspection</i>			•
	AS 3873 :2001	<i>Boiler and pressure vessels – Operation and maintenance</i>			•
	AS 3920.1-1993	<i>Assurance of product quality – Pressure equipment manufacture</i>	•	•	
	ASME I	<i>Power boilers</i>	•	•	
	ASME II	<i>Materials</i>	•	•	
	ASME V	<i>Non-destructive examination</i>	•	•	
	ASME VIII-1	<i>Pressure vessels</i>	•	•	
	ASME VIII- 2	<i>Pressure vessels – alternative rules</i>	•	•	
	ASME VIII-3	<i>Alternative rules for construction of high pressure vessels</i>	•	•	
	ASME IX	<i>Welding and brazing qualifications</i>	•	•	
	ANSI / NGV-2	<i>Basic requirement of compressed natural gas vehicle fuel containers</i>	•	•	
	CSA B51 Part 2	<i>High pressure cylinders for the on-board storage of natural gas as a fuel for automotive vehicles</i>	•	•	
ISO 11439:2000	<i>High pressure cylinders for the on-board storage of natural gas as a fuel for automotive vehicles</i>	•	•		
ISO/EN 13458 (Series)	<i>Cryogenic vessels – Static vacuum insulated vessels</i>	•	•	•	
Pressure piping	AS 4041-2006	<i>Pressure piping</i>	•	•	
Machinery guarding	AS 4024 (Series)	<i>Safeguarding of machinery – general principles</i>	•	•	•
	ISO 12100:2010	<i>Safety of machinery – General principles for design</i>	•	•	•
Scaffolding	AS/NZS 1576.1:2010	<i>Scaffolding – general requirements</i>	•	•	
	AS 1577-1993	<i>Scaffold planks</i>	•	•	
	AS/NZS 4576	<i>Guidelines for scaffolding</i>			•
Ladders	AS/NZS 1892.1/1892.2/1892.3	<i>Portable ladders</i>	•	•	
Spray painting	AS/NZS 4114.1	<i>Spray painting booths. Part 1: Design, construction and testing</i>	•	•	•
	AS/NZS 4114.2	<i>Spray painting booths. Part 2: Installation and maintenance</i>			•

Plant description	Reference number	Standard title	Design	Make	Use
Turbines	BS/EN 60593-2:1996	<i>Rules for steam turbine acceptance tests</i>	•		
	API 612	<i>Special purpose steam turbines for refinery services</i>	•		
Ventilation	AS 1668.2	<i>The use of ventilation and air conditioning in buildings</i>	•	•	•
Work boxes- crane lifted	AS 1418.17 1996	<i>Cranes (including hoists and winches)</i>	•	•	
	AS 2550	<i>Cranes – Safe use</i>			•
	AS 3860-1991	<i>Fixed guideway people movers</i>	•	•	•
	ISO 2374	<i>Lifting appliances – Range of maximum capacities for basic models</i>	•	•	

Key

Abbreviations name

ANSI	American National Standards Institute
API	American Petroleum Institute
AMBSC	Australian Miniature Boiler Safety Committee
AS	Australian Standard
ASME	American Society of Mechanical Engineers
AS/NZS	Australian Standard / New Zealand Standard
BS	British Standard
CSA	Canadian Standards Association
EN	Europaische Norm (European Standard)
IEC	International Electrochemical Commission
ISO	International Standards Organisation
NZS	New Zealand Standards
SAE	Society of Automotive Engineers